C
M28H
1898/99

Catalogue

OF THE

University of Maine

1898-1899

THE LIBRARY
OF THE
UNIVERSITY OF MAINE

Digitized by the Internet Archive
in 2013

http://archive.org/details/catalogfor189899univ

& Reid,
BINDERS,
AUGUSTA, ME.

WINGATE HALL.

CATALOGUE

OF THE

University of Maine

1898-1899

ORONO, MAINE

AUGUSTA
KENNEBEC JOURNAL PRINT
1899.

TABLE OF CONTENTS.

	PAGE
Calendar,	6
Establishment of the University,	9
Endowment and Income,	10
The Board of Trustees,	11
Advisory Board for the School of Law,	11
The Experiment Station Council,	12
The Faculty and other Officers,	13
Admission,	16
Entrance Examinations,	17
Table of Entrance Requirements,	19
Entrance Requirements,	20
Certificates of Fitness,	24
Approved Schools,	24
The Buildings and their Equipment,	29
The Departments of Instruction:	
English,	33
Modern Languages,	35
Latin,	37
Philosophy,	38
Civics and History,	39
Law,	40
Mathematics and Astronomy,	43
Physics,	46
Drawing,	47
Chemistry,	48

The Departments of Instruction—*Concluded:* PAGE
Natural History, ... 51
Agriculture, ... 54
Horticulture, ... 56
Pharmacy, ... 58
Civil Engineering, ... 60
Mechanical Engineering, ... 62
Electrical Engineering, ... 65
Military Science and Tactics,..... 67
The Organization of the University:
General Statement, ... 69
Explanation of Tables, ... 70
Studies of the Freshmen Year, All Courses,..... 70
The College of Arts and Sciences:
The Classical Course,..... 71
The Latin Scientific Course,..... 72
The Scientific Course,..... 73
The Chemical Course,..... 75
The Preparatory Medical Course,..... 76
The College of Agriculture:
The Agricultural Course, ... 78
The Short Courses in Agriculture,..... 80
The Agricultural Experiment Station,..... 83
The College of Engineering:
The Civil Engineering Course,..... 84
The Mechanical Engineering Course,..... 85
The Electrical Engineering Course,..... 87
The College of Pharmacy:
The Pharmacy Course,..... 89
The Short Course in Pharmacy,..... 90
The School of Law:
The Advisory Board,..... 92
The Faculty, ... 92

The School of Law—*Concluded:* PAGE
General Statement, ... 92
The Course of Study, ... 94
The Library and Reading Room, ... 95
The Museum and Herbarium, ... 96
Field Day, ... 97
General Regulations, ... 97
Scholarship Honors, ... 98
Student Expenses, ... 99
Loans, ... 102
The Alumni Associations, ... 103
Organizations, ... 104
The University Publications, ... 105
The Commencement, ... 106
Certificates and Degrees, ... 106
Scholarships and Prizes, ... 108
Appointments, ... 109
Public Worship, ... 110
Location, ... 110
Military Instruction, ... 111
The Corps of Cadets, ... 112
Catalogue of the Students, ... 115
Index, ... 126

CALENDAR.

FALL TERM, 1898.

September	19, Monday,	Arrearage examinations begin.
September	20, Tuesday,	Entrance examinations begin.
September	21, Wednesday,	Fall term begins.
November	22, Tuesday,	Meeting of the Board of Trustees.
November	24, Thursday,	Thanksgiving recess.
November	27, Sunday,	
December	2, Friday,	Sophomore prize declamation.
December	22, Thursday,	Christmas recess begins.

1899.

January	2, Monday,	Arrearage examinations begin. (Spring term studies).
January	4, Wednesday,	Christmas recess ends.
January	27, Friday,	Fall term ends.

SPRING TERM, 1899.

January	27, Friday,	Entrance examinations begin.
January	30, Monday,	Spring term begins.
February	22, Tuesday,	Washington's birthday.
March	29, Wednesday,	Easter recess begins.
April	3, Monday,	Arrearage examinations begin. (Fall term studies).
April	4, Tuesday,	Easter recess ends.

May	19, Friday,	Ivy day.
May	30, Tuesday,	Memorial day.
May	24, Wednesday,	Farmers' field day.
May	27, Saturday,	Senior vacation begins.
June	10, Saturday,	Junior exhibition.
June	11, Sunday,	Baccalaureate sermon.
June	12, Monday,	Convocation.
June	12, Monday,	Class day.
June	13, Tuesday,	Meeting of the Board of Trustees.
June	13, Tuesday,	Exhibition drill.
June	13, Tuesday,	Reception by the fraternities.
June	13, Tuesday,	Reception by the President.
June	14, Wednesday,	COMMENCEMENT.
June	14, Wednesday,	Commencement dinner.
June	14, Wednesday,	Meeting of the Alumni Association.
June	14, Wednesday,	Commencement concert.
June	15, Thursday,	Entrance examinations begin.

FALL TERM, 1899.

September	18, Monday,	Arrearage examinations begin.
September	19, Tuesday,	Entrance examinations begin.
September	20, Wednesday,	Fall term begins.
November	21, Tuesday,	Meeting of the Board of Trustees.
November	30, Thursday,	Thanksgiving recess.
December	3, Sunday,	
December	8, Friday,	Sophomore prize declamation.
December	21, Thursday,	Christmas recess begins.

1900.

January	2, Tuesday,	Arrearage examinations begin. (Spring term studies).
January	3, Wednesday,	Christmas recess ends.
January	26, Friday,	Term ends.

SPRING TERM, 1900.

January	26, Friday,	Entrance examinations begin.
January	29, Monday,	Spring term begins.
June	13, Wednesday,	COMMENCEMENT.

CALENDAR OF THE SCHOOL OF LAW.

1898.

October	5, Wednesday,	Fall term begins.
December	21, Wednesday,	Fall term ends.

1899.

January	18, Wednesday,	Winter term begins.
March	29, Wednesday,	Winter term ends.
April,	5, Wednesday,	Spring term begins.
June	14, Wednesday,	COMMENCEMENT.
October	4, Wednesday,	Fall term begins.
December	20, Wednesday,	Fall term ends.

1900.

January	10, Wednesday,	Winter term begins.
March	21, Wednesday,	Winter term ends.
March	28, Wednesday,	Spring term begins.
June	13, Wednesday,	COMMENCEMENT.

THE UNIVERSITY OF MAINE.

ESTABLISHMENT.

By an Act of Congress, approved July 2, 1862, it was provided that there should be granted to the states, from the public lands, "thirty thousand acres for each Senator and Representative in Congress," from the sale of which there should be established a perpetual fund "the interest of which shall be inviolably appropriated, by each state which may take and claim the benefit of this act, to the endowment, support, and maintenance of at least one college where *the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.*" The Act forbade the use of any portion of the principal or interest of this fund, for the purchase, erection, or maintenance of buildings; and required each state, taking the benefit of the provisions of the Act, "to provide within five years not less than one college" to carry out the purposes of the Act.

Maine accepted this grant in 1863, and in 1865 constituted "a body politic and corporate, by the name of the Trustees of the State College of Agriculture and the Mechanic Arts." The Trustees were authorized to receive and hold donations, to select the professors and other officers of the college, to establish the conditions for admission, to lay out courses of study, to grant degrees, and to exercise other usual powers and privileges.

The Governor and Council were given the right, "to examine into the affairs of the college, and the doings of the trustees, and to inspect all their records and accounts, and the buildings and premises occupied by the college."

It was provided that in addition to the studies especially required by the Act of Congress, the college should teach such other studies as the facilities would permit.

The Legislature of 1897 changed the name of the institution to "The University of Maine."

ENDOWMENT AND INCOME.

The State of Maine received, under the Act of Congress above referred to, two hundred and ten thousand acres of public land, from which the university has realized an endowment fund of $118,300. This has been increased by a bequest of $100,000 from Abner Coburn of Skowhegan, who was for many years president of the Board of Trustees. The town of Orono contributed $8,000, and the town of Oldtown $3,000, for the purchase of the site on which the buildings stand. The State has appropriated about $300,000 for the material equipment.

Under an Act of Congress approved March 2, 1887, the university receives $15,000 annually for the maintenance of the department known as the Agricultural Experiment Station.

Under an Act of Congress approved August 30, 1890, the university received for its more complete endowment and maintenance, $24,000 for the year ending June 30, 1898.

Under an Act of the Legislature, approved March 20, 1897, the university receives $20,000 annually from the State for current expenses. Student fees and miscellaneous receipts complete the income.

THE BOARD OF TRUSTEES.

Hon. Henry Lord, *President*,	Bangor.
Hon. William Thomas Haines, B. S., LL. B., *Secretary*,	Waterville.
Hon. Russell Benjamin Shepherd,	Skowhegan.
Arthur Lee Moore, B. S.,	Camden.
Hon. Elliott Wood,	Winthrop.
Hon. Charles Plummer Allen, B. S.,	Presque Isle.
Hon. Benjamin Franklin Briggs,	Auburn.
Hon. Edward Brackett Winslow,	Portland.

EXECUTIVE COMMITTEE.

Trustees Lord, Haines, and Allen.

TREASURER.

Hon. Isaiah Kidder Stetson, B. Ph., Bangor.

ADVISORY BOARD FOR THE SCHOOL OF LAW.

Hon. Henry Bradstreet Cleaves,	Portland.
Hon. William Henry Fogler,	Rockland.
Hon. Charles Hamlin, M. A.,	Bangor.
Hon. Herbert Milton Heath, M. A.,	Augusta.
Hon. Andrew Peters Wiswell, B. A.,	Ellsworth.

THE EXPERIMENT STATION COUNCIL.

BENJAMIN FRANKLIN BRIGGS,.....Auburn.
ARTHUR LEE MOORE, B. S.,.....Camden.
ELLIOTT WOOD, ...Winthrop.
Committee of the Board of Trustees.

ABRAM WINEGARDNER HARRIS, Sc. D., *President*,.....Orono.
President of the University.

CHARLES DAYTON WOODS, B. S., *Secretary*,.....Orono.
Director of the Station.

BENJAMIN WALKER MCKEEN,.....Fryeburg.
Representative of the State Board of Agriculture.

OTIS MEADER, ...Albion.
Representative of the Maine State Grange.

CHARLES S. POPE,
Representative of the State Pomological Society.

JAMES MONROE BARTLETT, M. S.,.....Orono.
LUCIUS HERBERT MERRILL, B. S.,.....Orono.
FRANCIS LEROY HARVEY, Ph. D.,.....Orono.
FREMONT LINCOLN RUSSELL, V. S.,.....Orono.
WELTON MARKS MUNSON, M. S.,.....Orono.
GILBERT MOTTIER GOWELL, M. S.,.....Orono.
Members of the Station Staff.

THE FACULTY AND OTHER OFFICERS.

ABRAM WINEGARDNER HARRIS, Sc. D.,.....Campus.
President.

MERRITT CALDWELL FERNALD, Ph. D.,.....Bennoch Street.
Professor of Philosophy.

ALFRED BELLAMY AUBERT, M. S.,.....Campus.
Professor of Chemistry.

ALLEN ELLINGTON ROGERS, M. A.,.....College Street.
Professor of Political Economy and History,
and Professor of Constitutional Law.

WALTER FLINT, M. E.,.....College Street.
Professor of Mechanical Engineering.

JAMES MONROE BARTLETT, M. S.,.....College Street.
Chemist in the Experiment Station.

LUCIUS HERBERT MERRILL, B. S.,.....Bennoch Street.
Professor of Biological Chemistry, and
Chemist in the Experiment Station.

FRANCIS LEROY HARVEY, Ph. D.,.....Forest Avenue.
Professor of Natural History, and Entomologist of the Experiment Station.

JAMES NORRIS HART, C. E., M. S.,.....Campus.
Professor of Mathematics and Astronomy.

FREEMONT LINCOLN RUSSELL, B. S., V. S.,.....Main Street.
Professor of Biology, and Veterinarian of the
Experiment Station.

WELTON MARKS MUNSON, M. S.,.....Main Street.
Professor of Horticulture, and Horticulturist of
the Experiment Station.

HORACE MELVYN ESTABROOKE, M. S., M. A.,.....Main Street.
Professor of English.

JAMES STACY STEVENS, Ph. D.,.....Main Street.
Professor of Physics.

GILBERT MOTTIER GOWELL, M. S.,.....Campus.
Professor of Animal Industry, and Agriculturist of the Experiment Station.

CHARLES DAYTON WOODS, B. S.,.....Main Street.
Professor of Agriculture, and Director of the Experiment Station.

.....
Professor of Military Science.

GEORGE ENOS GARDNER, M. A.,.....Bangor.
Professor of Law, and Dean of the School of Law.

LUCILIUS ALONZO EMERY, M. A., LL. D.,.....Ellsworth.
Lecturer on Roman Law.

CHARLES HAMLIN, M. A.,.....Bangor.
Lecturer on Insolvency.

ANDREW PETERS WISWELL, B. A.,.....Ellsworth.
Lecturer on Evidence.

LOUIS CARVER SOUTHARD, M. S.,.....Boston, Mass.
Lecturer on Medico-Legal Relations.

FOREST JOHN MARTIN, LL. B.,.....Bangor.
Lecturer on Pleading and Maine Practice.

HUGO CLARK, C. E.,.....Bangor.
Lecturer on Equity Pleading.

NATHAN CLIFFORD GROVER, B. S., C. E.,.....Campus.
Professor of Civil Engineering.

WILBUR FISK JACKMAN, B. S., Ph. C.,.....Mill Street.
Assistant Professor of Pharmacy.

EDWIN BRYANT NICHOLS, B. A.,.....Campus.
Assistant Professor of Modern Languages.

WALLACE STEDMAN ELDEN, M. A.,.....Main Street.
Assistant Professor of Latin and French.

*HOWARD SCOTT WEBB, M. E., E. E.,.....North Main Street.
Instructor in Mechanical Engineering.

PERLEY WALKER, B. M. E.,.....Campus.
Instructor in Mechanical Engineering, and Acting Instructor in Military Science.

REGINALD RUSDEN GOODELL, M. A.,.....Main Street.
Instructor in Modern Languages.

RALPH KNEELAND JONES, B. S.,.....Main Street.
Librarian.

---

*On leave.

CHARLES PARTRIDGE WESTON, B. C. E.,.....Campus.
Instructor in Civil Engineering.
LEONARD PERLEY DICKINSON, B. S.,.....Campus.
Instructor in Electrical Engineering.
GARNETT RYLAND, Ph. D.,.....Campus.
Instructor in Chemistry.
ROBERT HARPER MURRAY, B. A., LL. M.,.....Bangor.
Instructor in Law.
HAROLD SHERBURNE BOARDMAN, C. E.,.....Bangor.
Tutor in Drawing.
STANLEY JOHN STEWARD, B. M. E.,.....Mill Street.
Foreman of the Shop.
LUCIUS JERRY SHEPARD, B. S.,.....Mill Street.
Assistant Horticulturist in the Experiment Station.
ORA WILLIS KNIGHT, M. S.,.....Bangor.
Assistant Chemist in the Experiment Station.
ARTHUR ROBERT CRATHORNE, B. S.,.....Campus.
Tutor in Mathematics.
HERBERT GROVE DORSEY, M. S.,.....Campus.
Tutor in Physics.
ANDREW JARVIS PATTEN, B. S.,.....Forest Avenue.
Assistant Chemist in the Experiment Station.
ALLEN ROGERS, B. S.,.....Campus.
Assistant in Chemistry.
RALPH HAMLIN, B. C. E.,.....Main Street.
Assistant in Civil Engineering.
RAY HERBERT MANSON, B. M. E.,.....Campus.
Assistant in Electrical Engineering.
ELMER DREW MERRILL, B. S.,.....Campus.
Assistant in Natural History.
ARTHUR WELLINGTON PRICE, B. A.,.....Bangor.
Assistant in English.
LEON EDWIN RYTHER, B. S.,.....Campus.
Assistant in Physics.
ELIZABETH ABBOTT BALENTINE,.....Campus.
Secretary to the President and Secretary of the Faculty.

ADMISSION.

Applicants for admission must pass the required examinations, or present satisfactory certificates of fitness, and file with the Treasurer a bond for $150 signed by two bondsmen, as security for the payment of term bills. A cash deposit covering the bills of one term will be accepted in place of a bond. In the School of Law the fees must be paid in advance, and no bond or deposit is required. The University admits men and women, both residents of Maine, and non-residents.

Candidates for advanced standing are examined in the preparatory studies and in those previously pursued by the classes they propose to enter, or other equivalent studies. Certificates will be accepted for the preparatory work, but not for any part of the college work, unless done in some other college.

A student who has accomplished half of the preparatory course may be examined on that part, and receive credit therefor.

The attention of students preparing for the entrance examinations is called to the need of most careful work in mathematics. A good preparation in algebra and geometry is important for those who expect to enter engineering courses. Schools should give a part of the work in algebra and geometry, or should review these subjects, during the last year.

Persons, not candidates for a degree, who wish to take special studies, will be permitted to do so upon giving satisfactory evidence that they are prepared to take the desired studies. If they subsequently desire to become candidates for a degree, or to take a regular course, they will be required to pass the entrance examinations.

No examinations are required for admission to the short winter courses.

College graduates who wish to enter a technical course will be admitted to the junior class without examination. Students

in general college courses, who expect to pursue technical courses after graduation, should avail themselves of opportunities for the study of mathematics, physics, chemistry, and drawing, as a preparation for engineering courses; and of physics, chemistry, and drawing, for chemical and biological courses.

ENTRANCE EXAMINATIONS.

Examinations are held at Orono, beginning on the day before the opening of each term, and on the day after commencement. Examinations will be held, if desired, in each county of the State. These examinations are held on the day after commencement, and persons desiring examinations at such places must notify the President not later than June 1.

To save expense to candidates, examination papers will be sent to any satisfactory person who will consent to conduct an examination. The questions are to be submitted under the usual restrictions of a written examination, and the answers returned to the university accompanied by the indorsement of the examiner. Applications for such examinations must be made out on blanks to be obtained from the secretary of the faculty.

Candidates for the CLASSICAL COURSE are examined on—*Language,* English, Latin, Greek, and either French or German; *History,* Roman, Greek; *Mathematics,* Plane Geometry, Algebra.

Candidates for the LATIN SCIENTIFIC COURSE are examined on—*Language,* English, Latin, and either French or German; *History,* Roman; *Mathematics,* Plane Geometry, Algebra.

Candidates for the SCIENTIFIC COURSE are examined on—*Language,* English, and either French or German; *History,* One of the following,—General, Roman, Greek, English; *Mathematics,* Plane Geometry, Algebra; *Science,* Two of the following,—Botany, Chemistry, Physical Geography, Physics.

Candidates for the CHEMICAL, AGRICULTURAL (four years), PREPARATORY MEDICAL, and PHARMACY (four years) COURSES are examined on—*Language,* English, and one year of a foreign

language either ancient or modern; *Mathematics,* Plane Geometry, Algebra; *Science,* Two of the following,—Botany, Chemistry, Physical Geography, Physics.

Candidates for the CIVIL ENGINEERING, MECHANICAL ENGINEERING, and ELECTRICAL ENGINEERING COURSES are examined on—*Language,* English, and one year of a foreign language either ancient or modern; *Mathematics,* Plane and Solid Geometry, Algebra; *Science,* Two of the following,—Botany, Chemistry, Physical Geography, Physics.

Candidates for SHORT COURSES IN AGRICULTURE (one year or more) are examined on—*Elementary Subjects,* Arithmetic, English Grammar, Physiology; *Language,* English; *History,* United States; *Mathematics,* Algebra through simple equations of the first degree; *Science,* One of the following,—Botany, Chemistry, Physical Geography, Physics.

Candidates for the SHORT COURSE IN PHARMACY (two years) are examined on—*Elementary Subjects,* Descriptive Geography, Arithmetic, English Grammar, Physiology; *History,* United States; *Mathematics,* Algebra through simple equations of the first degree.

SUBSTITUTES.—One year of Latin will be accepted as a substitute for one of the following groups: (a) Geography, Arithmetic, English Grammar, and Physiology; (b) French or German; (c) One science.

One year of French or German will be accepted as a substitute for one of the following groups: (a) Geography, Arithmetic, English Grammar, Physiology; (b) One science.

Other equivalents will be accepted for any of the requirements except Mathematics, English, Latin, or Greek.

For the requirements for admission to the School of Law, see the article on the School of Law.

ENTRANCE REQUIREMENTS.

For requirements of the School of Law see the article on School of Law.
The stars indicate the studies required.

COLLEGE OF	ARTS AND SCIENCES.					AGRICULTURE.		ENGINEERING.			PHARMACY.	
COURSE.	Classical.	Latin Scientific.	Scientific.	Chemical.	Preparatory Medical.	Four years.	Special.	Civil Eng.	Mechanical Eng.	Electrical Eng.	Four years.	Two years.
Elementary: a												
Geography	....	....	....	....	...	....	....	....	....	...	....	*
Arithmetic	....	.. .	....	....	....	....	*	...	....	....	....	*
Physiology	....	....	....	....	....	....	*	....	....	....	....	*
Language:												
English	*	*	*	*	*	*	*b	*	*	*	*	*b
French German	*c	*c	*d	*d	*d	*d	....	*d	*d	*d	*d	*d
Latin	*	*										
Greek	*	....										
History:												
United States	....	....	...	....	....	...	*	....	....	....	....	*
General Roman Greek English	.... * *	.... *	*e	....	....	...	....	....	....	....	....	....
Mathematics:												
Plane Geometry	*	*	*	*	*	*	...	*	*	*	*	....
Solid Geometry	....	....	....	....	....	....	....	*f	*f	*f	....	....
Algebra	*	*	*	*	*	*	*g	*	*	*	*	*g
Science: a												
Botany Chemistry Physical Geog Physics	....	....	*h *	*h *	*h *	*h *	*i	*h *	*h *	*h *	*h *	....

a—One year of a foreign language, ancient or modern, will be accepted as a substitute for all the elementary studies, or for one science.
b—English grammar only.
c—One year of French or German.
d—One year of a foreign language, either ancient or modern. In consideration of the recent addition of this requirement, candidates who cannot satisfy it, but are otherwise well prepared, will be allowed to make it up as an extra study after admission. This privilege will be discontinued after 1902.
e—One from general, Roman, Greek, or English history.
f—See page 18.
g—Through simple equations of the first degree only.
h—Two sciences, from the list of four, are required.
i—One science, from the list of four, is required.

ENTRANCE REQUIREMENTS.

The following statements will show in detail the requirements in each subject:

Elementary Subjects.

Descriptive Geography.—The usual school course. Required for short course in pharmacy only.

Arithmetic.—The usual school course, including the metric system of weights and measures. Required for the short courses only.

Physiology.—Cells and tissues, skeleton, muscles, blood and circulation, respiration, nutrition and digestion, lymphatic system, excretory organs, nervous system, special senses, hygiene. Required for the short courses only.

Language.

English.—*Grammar.* The usual school course. Attention should be given to punctuation and the use of capital letters.

Reading and Practice. Each candidate will be required to present evidence of a general knowledge of the substance of the books mentioned below and to answer simple questions on the lives of their authors. The examination will usually be the writing of one or two paragraphs on each of several topics. The treatment of these topics is designed to test the power of clear and accurate expression, and will call for only a general knowledge of the substance of the books. In place of this test, the candidate may present an exercise book, certified by his instructor, containing compositions or other written work done in connection with the reading of the books.

In 1899, this part of the examination will be based upon: Dryden's Palamon and Arcite; Pope's Iliad, books I, VI, XXII, and XXIV; the Sir Roger de Coverley Papers in the Spectator; Goldsmith's The Vicar of Wakefield; Coleridge's Ancient Mariner; De Quincey's The Flight of a Tartar Tribe; Cooper's The Last of the Mohicans; Lowell's The Vision of Sir Launfal; Hawthorne's The House of the Seven Gables.

In 1900, it will be based upon: Dryden's Palamon and Arcite; Pope's Iliad, Books I, VI, XXII, and XXIV; the Sir Roger de Coverley Papers in the Spectator; Goldsmith's The Vicar of Wakefield; Scott's Ivanhoe; De Quincey's The Flight of a Tartar Tribe; Cooper's The Last of the Mohicans; Tennyson's The Princess; Lowell's The Vision of Sir Launfal.

In 1901, it will be based upon: Shakspere's Merchant of Venice; Pope's Iliad, books I, VI, XXII, and XXIV; the Sir Roger de Coverley Papers in the Spectator; Goldsmith's The Vicar of Wakefield; Coleridge's The Ancient Mariner; Scott's Ivanhoe; Cooper's The Last of the Mohicans; Tennyson's The Princess; Lowell's The Vision of Sir Launfal; George Eliot's Silas Marner.

Study and Practice. This part of the examination presupposes a careful study of the works named below. The examination will be upon subject-matter, form, and structure; and will also test the candidate's ability to express his knowledge with clearness and accuracy.

In 1899, this part of the examination will be based upon: Shakspere's Macbeth; Milton's Paradise Lost, books I and II; Burke's Speech on Conciliation with America; Carlyle's Essay on Burns.

In 1900, it will be based upon: Shakspere's Macbeth; Milton's Paradise Lost, books I and II; Burke's Speech on Conciliation with America; Macaulay's Essays on Milton and Addison.

In 1901, it will be based upon: Shakspere's Macbeth; Milton's L'Allegro and Il Penseroso; Comus; Lycidas; Burke's Speech on Conciliation with America; Macaulay's Essays on Milton and Addison.

FRENCH.—The candidate offering French must have: an accurate knowledge of the grammar, especially of the regular and irregular verbs; an elementary knowledge of French composition; the ability to read at sight French prose of average difficulty.

GERMAN.—The candidate offering German must have: an accurate knowledge of the essentials of the grammar; an elementary knowledge of German composition; the ability to read at sight German prose of average difficulty.

LATIN.—The grammar, including prosody; Cæsar's Gallic War, books I, II, III, and IV; Cicero's four orations against Cataline, and those for Archias and for the Manilian Law; Virgil's Eclogues and the Æneid, books I, II, III, IV, V, and VI; the sight translation of Latin passages of average difficulty; translation into Latin of simple English sentences, and easy narrative passages based on the prose authors read. For the last, a vocabulary of unusual words will be furnished. Equivalent readings will be accepted for those prescribed.

GREEK.—The grammar, including prosody; Xenophon's Anabasis, books I, II, III, and IV; Homer's Iliad, books I, and II; the sight translation of easy passages from Xenophon; the translation into Greek of easy passages based on the required books of the Anabasis. For the last, a vocabulary of unusual words will be furnished. Equivalent readings will be accepted.

HISTORY.

UNITED STATES HISTORY.—A knowledge such as may be obtained from Higginson's History of the United States.

GENERAL HISTORY.—A knowledge such as may be obtained from Myers's General History.

ROMAN HISTORY.—A knowledge such as may be obtained from Allen's Short History of the Roman People, to the death of Marcus Aurelius.

GREEK HISTORY.—Pennell's, or Myers's history, to the capture of Corinth, 146 B. C.

ENGLISH HISTORY.—A knowledge such as may be obtained from Montgomery's History of England.

MATHEMATICS.

PLANE GEOMETRY.—The first five books of Wells's, or Wentworth's Geometry, or an equivalent. The preparation should not neglect numerical exercises, original propositions, or the neat and careful construction of figures. The examination will include some original propositions for demonstration or construction.

SOLID GEOMETRY.—Books VI, VII, VIII, and IX of Wells's, or books VI, VII and VIII of Wentworth's Geometry, or an

A VIEW FROM THE CAMPUS.

equivalent. The examination will be planned to test the candidate's ability to apply the theorems to the computation of surfaces and volumes, as well as his readiness in demonstration. Required only of candidates for the engineering courses.

As this is a new requirement, and is not taught in all preparatory schools, students who cannot offer it, but are otherwise well fitted, will be allowed to take it as an extra study after admission. This privilege will be withdrawn after 1902.

ALGEBRA.—The elements, equations of the first degree, radicals, quadratic equations, arithmetical and geometrical progression. Candidates for the short courses in agriculture and the short course in pharmacy are not examined on the topics beyond simple equations of the first degree. A satisfactory preparation may be obtained from Greenleaf's Elementary, Newcomb's, Wells's Academic or Wentworth's School, Algebra.

SCIENCE.

BOTANY.—An elementary course which will bring the student in contact with plants. Gray's Lessons in Botany, Bailey's Lessons with Plants, Spaulding's Introduction to Botany, or Bergen's Elements of Botany, will serve as a satisfactory guide.

CHEMISTRY.—The necessary ground is covered by the following text-books: Fisher, Remsen, Roscoe (inorganic part), Shepard, Storer and Lindsay, Williams.

PHYSICAL GEOGRAPHY.—A satisfactory preparation may be obtained from Appleton's Physical Geography.

PHYSICS.—A satisfactory treatment of this subject may be found in Avery's, or Gage's Physics.

CERTIFICATES OF FITNESS.

Any preparatory school whose course of instruction covers in a satisfactory manner the requirements for admission, may be admitted to the list of approved schools. Application for such approval should be made to the President of the university, and must be accompanied by a detailed statement of the course of study.

Candidates for admission from these schools, will be admitted to the Freshman Class upon the certificate of the principals, showing that the required studies have been completed satisfactorily. Certificates must be made out on blanks furnished by the university.

APPROVED SCHOOLS.

Athol High School, *Athol, Mass.,*
F. C. Avery, Principal.

Bangor High School, *Bangor,*
Henry K. White, M. A., Principal.

Bar Harbor High School, *Bar Harbor,*
Prescott Keyes, Jr., B. C. E., Principal.

Bath High School, *Bath,*
H. E. Cole, M. A., Principal.

Belfast High School, *Belfast,*
Hugh D. McLellan, Principal.

Berwick Academy, *South Berwick,*
F. Stanley Stebbins, B. A., Principal.

Boynton High School, *Eastport,*
Everett L. Getchell, B. A., Principal.

Brewer High School, *Brewer,*
Elmer T. Boyd, B. A., Principal.

Bridge Academy, *Dresden Mills,*
Alonzo A. Morelen, B. A., Principal.

Bridgton Academy, *North Bridgton,*
C. C. Spratt, B. A., Principal.

Bridgton High School, *Bridgton,*
J. E. Connor, B. A., Principal.

Bristol Academy, *Taunton, Mass.,*
William A. Lackey, B. A., Principal.

Calais High School, *Calais,*
Verne M. Whitman, M. A., Principal.

Caribou High School, *Caribou,*
Bernard W. Owen, B. A., Principal.

Cherryfield Academy, *Cherryfield,*
H. L. Whitman, M. A., Principal.

Coburn Classical Institute, *Waterville,*
F. W. Johnson, M. A., Principal.

Cony High School, *Augusta,*
C. F. Cook, M. A., Principal.

Cornish High School, *Cornish,*
Stephen Rounds, Principal.

Deering High School, *Deering,*
Edgar H. Crosby, M. A., Principal.

Dexter High School, *Dexter,*
W. S. Brown, B. A., Principal.

Dover English High School, *Dover,*
W. J. Rideout, Principal.

East Corinth Academy, *East Corinth,*
A. L. Dennison, B. A., Principal.

East Maine Conference Seminary, *Bucksport,*
J. F. Haley, President.

Edward Little High School, *Auburn,*
J. F. Moody, B. A., M. A., Principal.

Ellsworth High School, *Ellsworth,*
H. A. Moore, B. A., Principal.

English High School, *Boston, Mass.,*
Robert E. Babson, B. A., Principal.

Farmington High School, *Farmington,*
Charles M. Pennel, B. A., Principal.

Fort Fairfield High School, *Fort Fairfield,*
Wm. L. Bonney, M. A., Principal.

Foxcroft Academy, *Foxcroft,*
Lyman K. Lee, B. A., Principal.

Framingham Academy and High School, *Framingham, Mass.,*
John H. Parsons, M. A., Principal.

Freeport High School, *Freeport,*
Will O. Hersey, B. A., Principal.

Gardiner High School, *Gardiner,*
William L. Powers, M. A., Principal.

George Stevens Academy, *Bluehill,*
Charles W. Cutts, B. A., Principal.

Gould's Academy, *Bethel,*
F. E. Hanscom, Principal.

Greeley Institute, *Cumberland Center,*
Percy F. Williams, B. A., Principal.

Guilford High School, *Guilford,*
William S. Parsons, B. A., Principal.

Hallowell High School, *Hallowell,*
Herbert W. Dutch, B. A., Principal.

Hampden Academy, *Hampden,*
George C. Webber, B. A., Principal.

Hebron Academy, *Hebron,*
W. E. Sargent, M. A., Principal.

Higgins Classical Institute, *Charleston,*
H. Warren Foss, B. A., Principal.

Island Falls High School, *Island Falls,*
Sans Lorenzo Merriman, B. A., Principal.

Leavitt Institute and Training School, *Turner Center,*
Leland A. Ross, Principal.

Lewiston High School, *Lewiston,*
G. H. Libby, B. A., Principal.

Limington Academy, *Limington,*
..... Principal.

Lincoln Academy, *Newcastle,*
George H. Larrabee, M. A., Principal.

Lisbon High School, *Lisbon,*
Abner T. Hinckley, B. A., Principal.

Machias High School, *Machias,*
D. Lyman Wormwood, B. A., Principal.

Madison High School, *Madison,*
Edward M. Tucker, B. A., Principal.

Milo High School, *Milo,*
Charles E. Perkins, Principal.

Monmouth Academy, *Monmouth,*
W. S. Masterman, Principal.

Monson Academy, *Monson,*
W. S. Knowlton, M. A., Principal.

North Brookfield High School, *North Brookfield, Mass.,*
C. L. Judkins, B. A., Principal.

North Yarmouth Academy, *Yarmouth,*
Rev. B. P. Snow, M. A., Principal.

Norway High School, *Norway,*
Arthur G. Wiley, B. A., Principal.

Oakland High School, *Oakland,*
F. L. Tapley, Principal.

Oldtown High School, *Oldtown,*
Harry T. Watkins, B. A., Principal.

Orono High School, *Orono,*
S. H. Powell, M. A., Principal.

Orange High School, *Orange, Mass.,*
Charles S. Simmons, Principal.

Palmer High School, *Palmer, Mass.,*
Alfred C. Thompson, B. A., Principal.

Parsonsfield Seminary and Piper High School, *N. Parsonsfield,*
Isaiah Trufant, M. A., Principal.

Patten Academy, *Patten,*
H. N. Gardner, B. A., Principal.

Pennell Institute, *Gray,*
W. B. Andrews, M. A., Principal.

Phillips High School, *Phillips,*
Ernest E. Morse, B. A., Principal.

Portland High School, *Portland,*
Albro E. Chase, B. A., Principal.

Plymouth High School, *Plymouth, Mass.,*
Agnes W. Lindsey, Principal.

Richmond High School, *Richmond,*
Frederick J. Libby, B. A., Principal.

Ricker Classical Institute, *Houlton,*
Arthur M. Thomas, M. A., Principal.

Rockland High School, *Rockland,*
L. E. Moulton, B. A., Principal.

Skowhegan High School and Bloomfield Academy, *Skowhegan,*
F. G. Farrington, B. A., Principal.

South Paris High School, *South Paris,*
L. P. Gerrish, B. A., Principal.

South Portland High School, *South Portland,*
Ralph A. Parker, B. A., Principal.

Thomaston High School, *Thomaston,*
Albert S. Cole, B. A., Principal.

Thornton Academy, *Saco,*
Edwin P. Sampson, M. A., Principal.

Topsham High School, *Topsham,*
John A. Cone, B. A., Principal.

Warren High School, *Warren,*
F. E. Russell, M. A., Principal.

Washington Academy, *East Machias,*
Fred O. Small, B. A., Principal.

Waterville High School, *Waterville,*
J. E. Nelson, Principal.

Westbrook High School, *Westbrook,*
Fred W. Freeman, M. A., Principal.

Westbrook Seminary, *Deering,*
Rev. H. S. Whitman, M. A., President.

Wilton Academy, *Wilton,*
Drew T. Harthorn, M. A., Principal.

Yarmouth High School, *Yarmouth,*
Herbert M. Moore, B. A., Principal.

THE BUILDINGS AND THEIR EQUIPMENT.

WINGATE HALL.—The most conspicuous building on the campus, Wingate Hall, named in honor of William P. Wingate of Bangor, long an honored member of the board of trustees, is a three-story brick structure rectangular in form, with a handsome clock tower. It was erected for the departments of civil and mechanical engineering, but is at present occupied in part by other departments. On the ground floor are two large designing rooms, recitation rooms, armory, instrument rooms, and private offices for the professors of civil and mechanical engineering. On the second floor is a room occupied by the Young Men's Christian Association, the offices and recitation rooms of the professor of mathematics and the professor of physics, the physical laboratory, and the apparatus room. On the third floor are large, well lighted drawing rooms. In the basement are the testing room of the department of civil engineering, and the dynamo laboratory. The testing room contains a Riehlé testing machine of 60,000 pounds capacity, cement testing machine, etc. The dynamo laboratory is provided with solid stone tables, and has working accommodations for twenty students.

OAK HALL.—North of Wingate Hall is Oak Hall, a substantial four-story brick building used as a dormitory for men, named in honor of Lyndon Oak of Garland, for many years a useful member of the board of trustees. It contains forty-nine study rooms for students, bath rooms, and reading room, is heated by steam, supplied with water, and lighted by electricity. It was remodeled in 1895.

FERNALD HALL.—This building, named in honor of Merritt C. Fernald, Ph. D., president of the college from 1879 to 1893, is a two-story brick building. situated south of Wingate Hall. It

contains twenty rooms devoted to the needs of the department of chemistry. On the first floor are the quantitative and pharmaceutical laboratories, office and private laboratories for the professors of chemistry and pharmacy; upon the second floor are the lecture rooms, the qualitative laboratory, the office and private laboratory of the instructor in qualitative analysis, a store room, and a recitation room. Under the roof are arranged the photographic studio, laboratory, and dark rooms. In the basement is an assay laboratory, the laboratory for beginners, and store rooms.

The department of chemistry is well supplied with apparatus, The greater part of the chemical library, including the current and bound volumes of journals, is kept in this building.

Coburn Hall.—Directly south of Fernald Hall is Coburn Hall, named in honor of Abner Coburn of Skowhegan, the chief benefactor of the university. It is a brick building, three stories in height. On the first floor are located the reading room and the library, the laboratory and recitation room of the professor of agriculture, and the recitation room of the professor of English. On the second floor are the botanical and entomological laboratories, and recitation rooms for the departments of natural history, civics, and modern languages. Over the library is the museum, extending through two stories. The collections are large and constantly increasing. On the third floor is the university chapel. In the basement is the President's office.

The Machine Shop.—In the rear of Fernald Hall is the machine shop, a wooden building 125 feet long and two stories high, containing the foundry, forge shop, carpenter shop, machine shop and tool room. The building is thoroughly equipped. An adjoining building, 30 by 57 feet, contains the dynamos, motors and storage battery, which operate the university lighting plant, and serve the seniors for study in their technical work in electrical engineering,

The Experiment Station Building.—South of the Machine Shop stands a two-story brick building with basement, which is devoted to the uses of the Agricultural Experiment Station. In the basement are rooms for the storage and preparation of

samples for analysis, and the boiler room. On the ground floor are the chemists' office, reagent room, the laboratory used in the analysis of foods and feeding stuffs, the nitrogen room, and the laboratory used in the analysis of fertilizers. On the second floor are the general office, the director's private office, the bacteriological laboratory, the journal room, and a storage room for books and pamphlets. The building is heated by steam, supplied with gas and electricity, and thoroughly equipped with apparatus.

The Horticultural Building.—East of the Experiment Station is the Horticultural Building, consisting of a head-house and three greenhouses. In the head-house are the office of the professor of horticulture, a work room, a seed storage room, a photographing room, the janitor's room, and a room used for storage. The main greenhouse, 20 feet by 100 feet, is devoted to the use of the Experiment Station, and to the instruction of students. A second structure, 20 feet by 80 feet, running parallel to the main greenhouse, is divided, one-half being used for growing plants, and the remainder as a potting and storage room. The third greenhouse is designed for investigations in plant nutrition. In the south end of this house is the conservatory.

The Dairy Building.—The Dairy Building, 50 feet by 42 feet, contains a milk room, a butter room, a cheese room, a cold storage room, a cheese curing room, a lecture room, the office of the professor of animal industry, and a laboratory. It is supplied with all necessary appliances for teaching the most approved methods of handling milk, cream, butter, and cheese. The building is heated with steam and supplied with hot and cold water. Power is furnished by a 6-horse power engine, and by a baby tread horse power.

The Mt. Vernon House.—This is a wooden building, completed in 1898, to furnish dormitory accommodations for women. It is at present occupied in part by members of the faculty, but will be entirely devoted to women, whenever the numbers demand it. The house is situated near the recitation and laboratory buildings, upon a site overlooking the campus, and commanding a magnificent view of the river, villages, and mountains.

It is two stories in height, built in the old colonial style, and consists of a long central portion and two wings. It contains parlor, dining room, kitchen, bath room, and sixteen study rooms, each intended for two students. The rooms are large, well lighted, heated by a combined system of hot air and hot water, and provided with electric lights from the University plant. A special feature is the long hall on each floor, extending sixty-six feet upon the front of the building, and wide enough to serve as assembly or study rooms. The building, and the students who live in it, are under the supervision of a competent matron.

The Fraternity Houses.—Four of the student fraternities occupy club houses. Three of the houses are on the campus, and one in the village of Orono. They are large, well arranged houses, affording rooms for about twenty-five students each. Three of the fraternities maintain their own boarding establishment under the supervision of a matron.

Other Buildings.—In addition to the buildings already described, there are six others devoted to various purposes. Among these are the President's house, the Commons, or general college boarding house, and three residences occupied by members of the faculty.

DEPARTMENTS OF INSTRUCTION.

ENGLISH.

PROFESSOR ESTABROOKE; MR. GOODELL; MR. PRICE.

Eh. 1. DECLAMATIONS.—In the freshman and sophomore years, the student is required to give seven declamations before his class each year—four in the fall and three in the spring. In the junior year, he is required to give two declamations in the fall and three in the spring. In the senior year, he delivers three orations. PROF. ESTABROOKE; MR. PRICE.

Eh 2. THEMES.—In his sophomore year, the student writes five themes, each containing from 1,000 to 1,200 words. The themes are historical in character—the results of the student's reading on special epochs of history, or of his study of the lives of historic men. In his junior year, he prepares the same number of themes, each containing from 1,000 to 1,200 words. He also submits a theme for a prize at the close of the year. In the senior year, he writes themes, prepares orations, or takes part in debates. PROF. ESTABROOKE; MR. GOODELL; MR. PRICE.

Eh 3. RHETORIC.—The classification of sentences—rhetorical, grammatical; analysis of the sentence with reference to punctuation; exercises in punctuation; diction, with special reference to purity, propriety, and precision of language; clearness, strength, and unity of sentences; extended study of the paragraph; themes—including the narrowing of the subject from general to particulars; construction of outline, etc.; fortnightly exercises, in extemporaneous speaking; frequent exercises in extemporaneous writing; formal essays.

The text-book is Genung's Outlines of Rhetoric. *Five hours a fortnight for eighteen weeks.* Fall term. PROF. ESTABROOKE.

Eh 4. Rhetoric.—Extended study of narration and description, argumentative composition, and persuasion; construction of analytical outlines of selections from Burke, Webster, Macaulay, and others; practice in different kinds of composition; exercises in extemporaneous speaking and writing, as in course 3.

The text-book is A. S. Hill's Principles of Rhetoric. *Five hours a fortnight for eighteen weeks.* Spring term. Prof. Estabrooke.

Eh 5. Anglo-Saxon.—Elements of Anglo-Saxon grammar; reading of easy prose and poetry. Constant reference is made to the relation of Anglo-Saxon to modern English.

The text-book is Smith's Old English Grammar. *Five hours a fortnight for eighteen weeks.* Spring term. Prof. Estabrooke.

Eh 8. English Literature.—The text-book is Pancoast's Introduction to English Literature, which is supplemented by frequent lectures. Some of the masterpieces of our language, together with the historical and social conditions under which they were produced, are studied in detail. The student prepares frequent essays upon the times and characters studied, makes analyses of the books, and writes critical reviews of the same. The work of the classroom is supplemented by study in the library.

Five hours a fortnight for eighteen weeks. Fall term. Prof. Estabrooke.

Eh 9. English Literature.—A continuation of course 8. *Five hours a fortnight for eighteen weeks.* Spring term. Prof. Estabrooke.

Eh 10. English Literature.—In this course particular attention is paid to the development of the English novel and to the Lake Poets. *Five hours a fortnight for eighteen weeks.* Fall term. Prof. Estabrooke.

Eh 11. English Literature.—A continuation of course 10, including a study of the most important American authors of the present century. *Five hours a fortnight for eighteen weeks.* Spring term. Prof. Estabrooke.

MODERN LANGUAGES.

ASSISTANT PROFESSOR NICHOLS; ASSISTANT PROFESSOR ELDEN; MR. GOODELL.

Ml 1. FRENCH.—The object of this course is to enable the student to acquire the essentials of the grammar, and the ability to read moderately easy prose.

The text-books are: Whitney, Practical Grammar, Part 1; Super, French Reader; Erckmann-Chatrian, Madame Thérèse; Mérimée, Colomba. *Five hours a week for eighteen weeks.* Fall term. PROF. NICHOLS; MR. GOODELL.

Ml 2. FRENCH.—A continuation of course 1.

The text-books are: Whitney, Practical French Grammar, Part 2; Hugo, Quatrevingttrieze; Angier, Le Gendre de M. Poirier; Fortier, Napóleon; Mariotte-Davies, Elementary Scientific French Reader. *Five hours a week for eighteen weeks.* Spring term. PROF. NICHOLS; MR. GOODELL.

Ml 3. FRENCH.—Hugo, Hernani; Balzac, Eugéne Grandet; Herdler, Scientific French Reader. Composition. *Five hours a fortnight for eighteen weeks.* Fall term. PROF. NICHOLS; PROF. ELDEN.

Ml 4. FRENCH.—Daudet, Morceaux Choisis; Fortier, Histoire de la Litterature Française; Sainte-Beuve, Seven of the Causeries du Lundi. Composition and collateral reading. *Five hours a fortnight for eighteen weeks.* Spring term. PROF. NICHOLS; PROF. ELDEN.

Ml 5. GERMAN.—An introductory course, covering the elements of the grammar.

The text-books are: Thomas, Practical German Grammar, Part 1; Heyde, L'Arrabbiata; Gerstäcker, Irrfahrten; Storm, Immensee. *Five hours a week for eighteen weeks.* Fall term. MR. GOODELL.

Ml 6. GERMAN.—Thomas, Practical German Grammar, Part 2; Bewdix, Die Hochzeitsreise; Keller, Dietigen; Helmholz, Goethe's Naturwissenschaftliche Arbeiten; Freytag Die Journalisten. *Five hours a week for eighteen weeks.* Spring term. MR. GOODELL.

Ml 7. GERMAN.—Brandt and Day, Scientific German Reader; Schiller, Wilhelm Tell. *Five hours a fortnight for eighteen weeks.* Fall term. PROF. NICHOLS.

Ml 8. GERMAN.—Lessing, Emilia Galotte; Cohn, Ueber Bakterien; Goethe, Dichtung und Wahrheit. *Five hours a fortnight for eighteen weeks.* Spring term. PROF. NICHOLS.

Ml 9. SPANISH.—This course is designed to give a reading knowledge of Spanish. Elective for those who have completed course 2.

The text-books are: Edgren, Spanish Grammar; Ramsey, Spanish Reader; de Larra, Partir á Tiemp; Beeton de los Herreros, La Independencia; Galdós, Doña Perfecta. *Five hours a fortnight for eighteen weeks.* Given in the fall term of even years. PROF. NICHOLS.

Ml 10. SPANISH.—A continuation of course 9. *Five hours a fortnight for eighteen weeks.* Given in the spring term of odd years. PROF. NICHOLS.

Ml 11. ITALIAN.—The aim of this course is a reading knowledge of Italian. Elective for those who have completed course 2.

The text-books are: Grandgent, Italian Grammar; De Amicis, Cuore; Del Testa, L'Oro e l'Orpello; Manzoni, I promessi Spori. *Five hours a fortnight for eighteen weeks.* Given in the fall term of odd years. PROF. NICHOLS.

Ml 12. ITALIAN.—A continuation of course 11.

Five hours a fortnight for eighteen weeks. Given in the spring term of even years. PROF. NICHOLS.

Ml 13. OLD FRENCH.—Paris, Extraits de la Chanson de Roland; Constans, Chrestomathie de l'Ancien Français. Lectures. Assigned readings and essays required. *Five hours a fortnight for eighteen weeks.* Fall term. PROF. NICHOLS.

Ml 14. OLD FRENCH.—A continuation of course 13.

Five hours a fortnight for eighteen weeks. Spring term. PROF. NICHOLS.

Ml 15. French Literature.—French literature of the sixteenth and seventeenth centuries. The more important authors will be read. Lectures. Collateral readings and composition. Elective for those who have completed course 4. *Five hours a fortnight for eighteen weeks.* Given in the fall term of even years. Prof. Nichols.

Ml 16. French Literature.—A continuation of course 15. *Five hours a fortnight for eighteen weeks.* Given in the spring term of odd years. Prof. Nichols.

Ml 17. French Literature.—French Literature of the eighteenth and nineteenth centuries. The more important authors will be read. Lectures. Collateral readings and composition. Elective for those who have completed course 4. *Five hours a fortnight for eighteen weeks.* Given in the fall term of odd years. Prof. Nichols.

Ml 18. French Literature.—A continuation of course 17. *Five hours a fortnight for eighteen weeks.* Given in the spring term of even years. Prof. Nichols.

LATIN.

Assistant Professor Elden.

Lt 1. Livy.—History of Rome, books I, XXI and XXII. The text-books are Livy, and Collar's Latin Composition. *Five hours a week for eighteen weeks.* Fall term.

Lt 2. Cicero.—De Amicitia and De Senectute, selected letters. The text-book is Bennett's M. Tulli Ciceronius Laelius De Amicitia. *Five hours a week for eighteen weeks.* Spring term.

Lt 3. Tacitus.—Germania and Agricola. The text-book is Hopkins's Germania and Agricola. *Five hours a fortnight for eighteen weeks.* Fall term.

Lt 4. Horace.—Odes and Epodes; Satires and Epistles. The text-books are: Shorey's Odes and Epodes; Kneeland's Satires and Epistles. *Five hours a fortnight for eighteen weeks.* Spring term.

Lt 5. Plautus and Terence.—
The text-books are: Sonnenschein's Captivi of Plautus; Chase and Stuart's Adelphi and Andria of Terence. *Five hours a fortnight for eighteen weeks.* Fall term.

Lt 6. Pliny the Younger and Juvenal.—Selected letters.
The text-books are: Richard and Bernard's Letters of Pliny; Lindsay's Satires of Juvenal. *Five hours a fortnight for eighteen weeks.* Spring term.

Lt 9. Latin Poetry.—The text-book is Crowell's Selections from the Latin Poets. *Five hours a fortnight for eighteen weeks.* Fall term.

Lt 10. Tacitus.—Histories.
The text-book is Tyler's Histories. *Five hours a fortnight for eighteen weeks.* Spring term.

Lt 11. Latin Literature.—A systematic study of Latin literature, particularly of the development of the satire, and a comparison with its treatment in modern literatures. Illustrative readings from different writers will be required. Special topics in Roman archæology will be investigated, and attention given to the manners and customs of the Greeks and Romans. Lectures, recitations, and private readings.
The text-book is Crutwell's History of Roman Literature. *Five hours a fortnight for eighteen weeks.* Fall term.

Lt 12. Latin Literature.—A continuation of course 11. *Five hours a fortnight for eighteen weeks.* Spring term.

PHILOSOPHY.

Professor Fernald.

Pl 1. Psychology.—Under the elementary processes of life are considered, consciousness, discrimination, sensation, feeling, conation, ideation; under the more elaborate processes, perception by the senses, memory, imagination, influence and judgment, intuition, conceptions, the emotions and sentiments, will as volition, will as choice, and will in relation to character.
The text-book is Ladd's Outlines of Descriptive Psychology. *Five hours a fortnight for eighteen weeks.* Fall term.

Pl 2. Logic.—The object of this course is to give the student a just appreciation of the functions of language as a means of expressing thought, and a familiarity with the principles of deductive and inductive reasoning. The student is given frequent drills in the application of logical principles.

The text-book is Ryland's Logic. *Five hours a fortnight for eighteen weeks.* Spring term.

Pl 3. History of Philosophy.—The text-book is Weber's History of Philosophy. *Five hours a fortnight for eighteen weeks.* Fall term. Prof. Rogers.

CIVICS AND HISTORY.

Professor Rogers.

Cv 1. General History.—A study of primitive institutions and customs.

The text-book is Schwill's History of Modern Europe. *Five hours a fortnight for eighteen weeks.* Spring term.

Cv 2. English History.—The text-book is Green's Shorter History of the English People. *Five hours a fortnight for eighteen weeks.* Spring term.

Cv 3. American History.—Lectures, supplemented by topical investigation and study. *Two hours a week for eighteen weeks.* Spring term.

Cv 4. The Philosophy of History.—The literature, learning, political and economic conditions of the great historic nations, and the growth of their institutions.

The text-book, Duruy's History of the Middle Ages, is supplemented by lectures and topical studies. *Five hours a fortnight for eighteen weeks.* Offered in the fall term of even years.

Cv 8. Political Economy.—Instruction is given by lectures. Topical readings and investigations are required. *Five hours a week for eighteen weeks.* Spring term.

Cv 9. Constitutional Law and History.—An outline of Anglo-Saxon institutions, the development of the English Constitution, the growth and political conditions of the American colonies, the Articles of Confederation, the adoption of the Constitution, and the comparative study of the Federal and the State Constitutions from the historical and legal standpoints.

The text-book is Rogers's Our System of Government. *Five hours a week for eighteen weeks.* Fall term.

Cv 10. Municipal Law.—Lectures on the general principles of contracts, sales, notes, bills, conveyancing, agency, bailments, and insurance. *One hour a week for eighteen weeks.* Spring term.

Cv 11. International Law.—The text-book is Woolsey's International Law. *Five hours a fortnight for eighteen weeks.* Offered in the fall term of odd years.

Cv 12. Library Work.—The aim of this work is to familiarize the student with the literature of history and economics and to teach him to make critical and independent investigation of questions connected with these subjects.

†*Five hours a fortnight for eighteen weeks.* Spring term.

LAW.

Lw 1. Contracts.—The text-book is Huffcut & Woodruff's Cases on Contract. *Four hours a week for eleven weeks.* Fall term. Prof. Gardner.

Lw 2. Contracts.—A continuation of course 1.

Four hours a week for ten weeks. Winter term. Prof. Gardner.

Lw 3. Torts.—The text-book is Bigelow's Cases on Torts.

Four hours a week for eleven weeks. Fall term. Mr. Murray.

Lw 4. Torts.—A continuation of course 3.
Three hours a week for ten weeks. Winter term. Mr. Murray.

Lw 5. Real Property.—The text-book is Tiedeman on Real Property. *Four hours a week for eleven weeks.* Fall term. Prof. Gardner.

Lw 6. Real Property.—A continuation of course 5.
Three hours a week for ten weeks. Winter term. Prof. Gardner.

Lw 7. Real Property.—A continuation of course 6.
Two hours a week for eleven weeks. Spring term. Prof. Gardner.

Lw 8. Domestic Relations.—The text-book is Ewell's Cases on Domestic Relations. *Two hours a week for ten weeks.* Winter term. Prof. Gardner.

Lw 9. Criminal Law.—The text-book is Chaplin's Cases on Criminal Law. *Two hours a week for eleven weeks.* Spring term. Mr. Murray.

Lw 10. Sales.—The text-book is Burdick's Cases on Sales.
Three hours a week for eleven weeks. Spring term. Prof. Gardner.

Lw 11. Bailments.—The text-book is McClain's Cases on Carriers. *Three hours a week for eleven weeks.* Spring term. Mr. Murray.

Lw 12. Common Law Pleading.—The text-book is Perry on Pleading. *Two hours a week for eleven weeks.* Spring term. Mr. Martin.

Lw 13. History of Law.—Lectures.
One hour a week for eleven weeks. Fall term. Prof. Rogers.

Lw 14. Bankruptcy.—Lectures.
One hour a week for eleven weeks. Fall term. Mr. Hamlin.

Lw 15. Bankruptcy.—A continuation of course 14.
One hour a week for ten weeks. Winter term. Mr. Hamlin.

Lw 16. Bankruptcy.—A continuation of course 15.
One hour a week for eleven weeks. Spring term. Mr. Hamlin.

Lw 17. Evidence.—The text-book is Thayer's Cases on Evidence. *Four hours a week for eleven weeks.* Fall term. Prof. Gardner.

Lw 18. Evidence.—A continuation of course 17.
Four hours a week for ten weeks. Winter term. Prof. Gardner.

Lw 19. Equity.—The text-books are Bispham's Principles of Equity and Shepard's Cases in Equity. *Four hours a week for eleven weeks.* Fall term. Mr. Murray.

Lw 20. Equity.—A continuation of course 19.
Four hours a week for ten weeks. Winter term. Mr. Murray.

Lw 21. Corporations.—The text-book is Elliott on Private Corporations. *Four hours a week for eleven weeks.* Fall term. Prof. Gardner.

Lw 22. Agency.—The text-book is Huffcut's Cases on Agency. *Two hours a week for ten weeks.* Winter term. Prof. Gardner.

Lw 23. Constitutional Law.—The text-book is Boyd's Cases. *Two hours a week for ten weeks.* Winter term. Prof. Rogers.

Lw 24. Commercial Paper.—The text-book is Huffcutt's Cases on Negotiable Instruments. *Four hours a week for eleven weeks.* Spring term. Prof. Gardner.

Lw 25. Wills and Administration.—The text-book is Chaplin's Cases on Wills. *Four hours a week for eleven weeks.* Spring term. Prof. Gardner.

Lw 26. Partnership.—The text-book is Burdick's Cases on Partnership. *Four hours a week for eleven weeks.* Spring term. Mr. Murray.

Lw 27. Equity Pleading.—The text-book is Langdell's Equity Pleading. *One hour a week for eleven weeks.* Spring term. Mr. Clark.

Lw 28. Roman Law.—Lectures.
One hour a week for eleven weeks. Spring term. Judge Emery.

Lw 29. Evidence.—Lectures.
The time is not fixed. Judge Wiswell.

Lw 30. Medico-Legal Relations.—Lectures.
One hour a fortnight for ten weeks. Winter term. Mr. Southard.

Lw 31. Medico-Legal Relations.—A continuation of course 30. *One hour a fortnight for eleven weeks.* Spring term. Mr. Southard.

MATHEMATICS AND ASTRONOMY.

Professor Hart; Professor Fernald; Mr. Crathorne.

Ms 1. Solid Geometry.—Solid and spherical geometry, including the mensuration of solids, and original demonstrations.
The text-book is Baker's Solid Geometry. *Five hours a week for eight weeks.* Spring term. Prof. Hart; Mr. Crathorne.

Ms 18. Algebra.—Review of quadratic equations and of the binomial theorem with integral, fractional, and negative exponents; variation; progression; convergence and divergence of series; undetermined coefficients; partial fractions; permutations and combinations; probability; logarithms; exponential and logarithmic series; computation of logarithms; the theory of equations.
The text-book is Wells's College Algebra. *Five hours a week for eighteen weeks.* Fall term. Prof. Hart; Prof. Fernald; Mr. Crathorne.

Ms 4. Plane Trigonometry.—The text-book is Phillips and Strongs Trigonometry. *Five hours a week for ten weeks.* Spring term. Prof. Hart; Prof. Fernald; Mr. Crathorne.

Ms 19. Spherical Trigonometry.—A continuation of course 4, with additional problems and applications to spherical trigonometry.

The text-book is Crockett's Plane and Spherical Trigonometry. *Five hours a week for eight weeks.* Spring term. Prof. Hart; Mr. Crathorne.

Ms 5. Analytic Geometry.—A brief study of the point, right line, and conic sections.

The text-book is Wentworth's Analytic Geometry. *Five hours a fortnight for eighteen weeks.* Spring term. Mr. Crathorne.

Ms 6. Analytic Geometry.—A more extended course. The straight line and conic sections, including polar and oblique coördinates; the equation of the second degree; introduction to solid analytic geometry.

The text-book is Nichols's Analytic Geometry. *Five hours a week for eighteen weeks.* Fall term. Prof. Fernald.

Ms 7. Calculus.—Differentiation; integration by fundamental formulas; integration regarded as a summation; definite integrals.

The text-book is Osborne's Differential and Integral Calculus. *Five hours a week for eighteen weeks.* Spring term. Prof. Hart; Prof. Fernald.

Ms 8. Calculus.—Applications of differential calculus; applications of integral calculus.

The text-book is Osborne's Differential and Integral Calculus. *Five hours a fortnight for eighteen weeks.* Fall term. Prof. Hart.

Ms 9. Descriptive Astronomy.—The text-book is supplemented by informal lectures, and illustrated by lantern slides, the Trouvelot drawings of celestial objects, and observations with an equatorial telescope.

The text-book is Young's Elements of Astronomy. *Five hours a fortnight for eighteen weeks.* Spring term. Prof. Hart.

Ms 10. Practical Astronomy.—Problems in the conversion of time, the determination of terrestrial latitudes and longitudes, and the establishment of meridian lines. The instruments used are the sextant, and artificial horizon, a portable chronometer, theodolite, and vertical circle. *Five hours a fortnight for eighteen weeks.* Spring term. Prof. Hart.

Ms 11. Advanced Algebra.—Determinants and the solution of higher equations. *Five hours a fortnight for eighteen weeks.* Spring term. Prof. Hart.

Ms 12. Advanced Integral Calculus.—A course based upon Byerly's Integral Calculus. *Five hours a fortnight for eighteen weeks.* Given in the fall term term of odd years. Prof. Hart.

Ms 13. Integral Calculus.—A continuation of course 12. *Five hours a fortnight for eighteen weeks.* Given in the spring term of even years. Prof. Hart.

Ms 20. Solid Analytic Geometry.—Lectures based on C. Smith's Solid Geometry. *Five hours a fortnight for eighteen weeks.* Given in the fall term of even years. Prof. Hart.

Ms 15. Differential Equations.—The text-book is Murray's Differential Equations. *Five hours a fortnight for eighteen weeks.* Given in the spring term of odd years. Prof. Hart.

Ms 16. Practical Astronomy.—The theory and use of the sextant, universal instrument, transit, and zenith telescope. Given in 1897-8 and alternate years. *Five hours a fortnight for eighteen weeks.* Given in the fall term of odd years. Prof. Hart.

Ms 17. Practical Astronomy.—A continuation of course 16. Given in 1897-8 and alternate years. *Five hours a week for eighteen weeks.* Given in the spring term of even years. Prof. Hart.

PHYSICS.

PROFESSOR STEVENS; MR. DORSEY; MR. RYTHER.

Ps 1. GENERAL PHYSICS.—Lectures on the dynamics of solids, liquids and gases; sound and light; experiments before the class; problems. *Five hours a week for eighteen weeks.* Fall term. PROF. STEVENS.

Ps 2. GENERAL PHYSICS.—A continuation of course 1; heat and electricity. *Five hours a fortnight for eighteen weeks.* Spring term. PROF. STEVENS.

Ps 12. GENERAL PHYSICS.—A course covering the ground of course 1, with more attention to the experimental and historical aspects.

The text-book is Gage's Principles of Physics. *Five hours a fortnight for eighteen weeks.* Fall term. MR. DORSEY.

Ps 13. GENERAL PHYSICS.—A continuation of course 12.

The text-book is Gage's Principles of Physics. *Five hours a fortnight for eighteen weeks.* Spring term. MR. DORSEY.

Ps 3. ELEMENTARY PHYSICS.—A non-mathematical course, covering the ground of course 1. The recitations are supplemented by lectures and experimental demonstrations.

The text-book is Dolbear's Natural Philosophy. *Five hours a fortnight for eighteen weeks.* Fall term. MR. DORSEY.

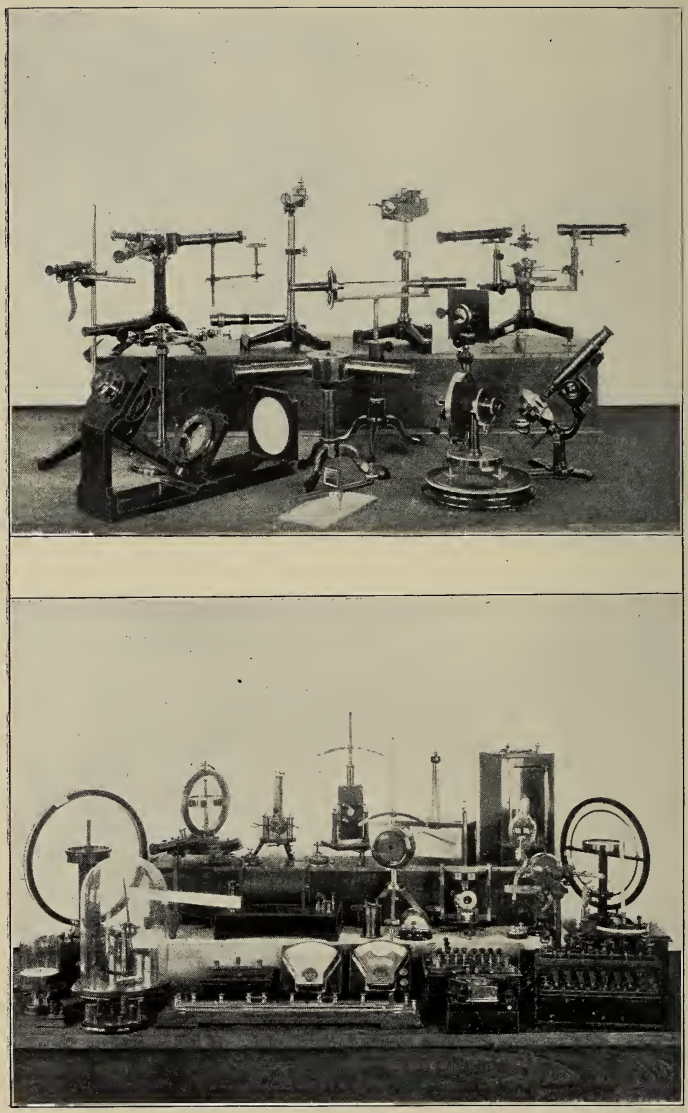
Ps 4. ELEMENTARY PHYSICS.—A continuation of course 3.

The text-book is Dolbear's Natural Philosophy. *Two hours a week for eighteen weeks.* Spring term. MR. DORSEY.

Ps 5. LABORATORY PHYSICS.—The subjects usually included in an under-graduate course. Special attention is given to the reduction of observations, and the tabulation of results.

Nichols's Laboratory Manual is made the basis of most of the experiments. †*Five hours a week for eighteen weeks.* Spring term. PROF. STEVENS; MR. DORSEY; MR. RYTHER.

Ps 6. LABORATORY PHYSICS.—A brief course for students in the short course in pharmacy. *Two hours a fortnight for eighteen weeks.* Spring term. MR. RYTHER.



OPTICAL AND ELECTRICAL APPARATUS.

Ps 7. Advanced Optics.—Lectures in continuation of course 1, based chiefly upon Preston's Light. *Five hours a fortnight for eighteen weeks.* Spring term. Prof. Stevens.

Ps 8. Mathematical Physics.—One course in mathematical physics is offered each year. For this year the text-book is Everett's Vibratory Motion and Sound. *Five hours a fortnight for eighteen weeks.* Fall term. Prof. Stevens.

Ps 9. Laboratory Physics.—General laboratory work in continuation of course 5. †*Five hours a week for eighteen weeks.* Fall term. Prof. Stevens; Mr. Ryther.

Ps 10. Laboratory Physics.—Advanced laboratory work in optics, in continuation of course 9. †*Five hours a week for eighteen weeks.* Spring term. Prof. Stevens; Mr. Ryther.

Ps 11. Electrical Measurements and Testing.—The measurement of resistance, potential, and current; the testing of galvanometers, etc. The charge for this course is $2.50. †*Four hours a week for eighteen weeks.* Fall term. Mr. Dorsey.

DRAWING.

Mr. Boardman.

Dr 1. Drawing.—Free-hand work in perspective and model drawing; lettering.

†*Five hours a week for eighteen weeks.* Fall term.

Dr 2. Mathematical Drawing.—The plotting of functions, and the solution of equations by the graphic method.

†*Three hours a week for thirteen weeks.* Fall and spring terms.

Dr 3. Mechanical Drawing.—Instruction and practice in the care and use of drawing instruments, in the drawing of geometrical problems, and in the use of water colors. The text-book is Faunce's Mechanical Drawing.

†*Five hours a week for eighteen weeks.* Spring term.

Dr 4. Mechanical Drawing.—Problems in shades and shadows, and dimension drawing.

The text-book is Faunce's Mechanical Drawing. †*Seven hours a week for eighteen weeks.* Fall term.

Dr 5. General Drawing.—Isometric and cabinet projections, perspective, and the preparation of working drawings. Lectures and exercises in the drawing room.

†*Ten hours a week for five weeks.* Spring term.

Dr 6. Descriptive Geometry.—Elementary problems; tangents, intersection of planes, cyclinders, cones, spheres, etc. The time is divided equally between the recitation room and drawing room.

The text-book is Church's Descriptive Geometry. *Five hours a fortnight for eighteen weeks.* Fall term.

Dr 7. Descriptive Geometry.—A continuation of course 6. *Three hours a fortnight for eighteen weeks.* Spring term.

Dr 8. Stereotomy.—The application of the methods of descriptive geometry to the preparation of drawings for retaining walls, bridge abutments, piers, arches, etc.

†*Ten hours a week for five weeks.* Spring term.

CHEMISTRY.

Professor Aubert; Dr. Ryland; Mr. Rogers.

Ch 1. General Chemistry.—Recitations and lectures on the general principles of chemistry, illustrated by charts, experiments, etc.

The text-book is Newth's Text-Book of Inorganic Chemistry, *Five hours a fortnight for eighteen weeks.* Fall term. Dr. Ryland.

Ch 2. General Chemistry.—A continuation of course 1.

The text-book is Newth's Text-Book of Inorganic Chemistry. *Five hours a week for eighteen weeks.* Spring term. Dr. Ryland.

Ch 3. Laboratory Chemistry.—The preparation of the more common elements and inorganic compounds; a study of their properties; elementary analysis.

The text-book is Remsen and Randall's Chemical Experiments. †*Two hours a week for eighteen weeks.* Fall term. Mr. Rogers.

Ch 4. Laboratory Chemistry.—A continuation of course 3. †*Two hours a week for eighteen weeks.* Spring term. Mr. Rogers.

Ch 5. Chemical Theory.—The text-book is Joannis, Cours Elementaire de Chimie, Vol. 1. *Five hours a fortnight for eighteen weeks.* Fall term. Prof. Aubert.

Ch 6. Inorganic Chemistry.—The non-metallic elements.

The text-book is Joannis, Cours Elementaire de Chimie, vols. 1 and 2. *Five hours a fortnight for eighteen weeks.* Spring term. Prof. Aubert.

Ch 7. Inorganic Chemistry.—The metals.

The text-book is Joannis, Cours Elementaire de Chimie, Vol. 2. *Five hours a fortnight for eighteen weeks.* Fall term. Prof. Aubert.

Ch 8. Organic Chemistry.—Lectures and recitations, illustrated by specimens; a laboratory course in the preparation of organic compounds.

The text-book is Joannis, Cours Elementaire de Chimie, Vol. 3. *Five hours a fortnight for nine weeks.* Spring term. Prof. Aubert.

Ch 9. Organic Chemistry.—A short course setting forth the properties of organic compounds, the general methods of preparing them, and special methods for preparing some of the most important.

The text-book is Turpin's Organic Chemistry. *Five hours a fortnight for eighteen weeks.* Fall term. Dr. Ryland.

Ch 10. Chemical Reading.—Study and translation of foreign works. *One hour a week for eighteen weeks.* Fall term. Prof. Aubert.

Ch 11. Laboratory Processes.—Laboratory methods and processes used in the arts. *Five hours a fortnight for eighteen weeks.* Spring term. Prof. Aubert.

Ch 12. Organic Chemicals.—The more common forms of apparatus and processes used in the preparation and synthesis of organic substances.

Cohen's Practical Organic Chemistry is used for reference. †*Five hours a week for eighteen weeks.* Fall term. Prof. Aubert.

Ch 13. Mineralogy.—Determinative mineralogy and blow-pipe analysis.

The text-book is Moses and Parson's Elements of Mineralogy. †*Two hours a week for eighteen weeks.* Spring term. Dr. Ryland.

Ch 14. Qualitative Analysis.—The determination and separation of acids and bases in simple and complex substances, and the writing of the reactions.

The text-book is Noyes's Qualitative Analysis. *The time varies; it is stated in the tables.* Dr. Ryland.

Ch. 15. Qualitative Analysis.—The text-book is Noyes's Qualitative Analysis. *The time varies; it is stated in the tables.* Dr. Ryland.

Ch 16. Quantitative Analysis.—Gravimetric determinations.

The text-book is Appleton's Quantitative Analysis. *The time varies; it is stated in the tables.* Prof. Aubert.

Ch 17. Quantitative Analysis.—A continuation of course 16.

The text-book is Clowes and Coleman's Quantitative Analysis. *The time varies; it is stated in the tables.* Prof. Aubert.

Ch 18. Quantitative Analysis.—Analysis of complex aloys, minerals, etc.

The text-book is Clowes and Coleman's Quantitative Analysis. †*Ten hours a week for eighteen weeks.* Prof. Aubert.

Ch 19. Volumetric Analysis and Assaying.—Acidimetry, alkalimetry, oxydimetry; gold and silver assaying.

The text-book is Clowes and Coleman's Quantitative Analysis. *The time varies; it is stated in the tables.* Prof. Aubert.

Ch 20. Agricultural Analysis.—The analysis of fodders, fertilizers, milk, and other agricultural products. The methods are those recommended by the Association of Official Agricultural Chemists. *The time varies; it is stated in the tables.* Prof. Aubert.

Ch 21. Toxicology and Biological Analysis.—The determination of the commoner poisons; the analysis of urine and other animal secretions and products, normal and pathological.

The text-book is Witthaus's Urinalysis. *The time varies, it is stated in the tables.* Prof. Aubert.

Ch 22. Thesis Work.—The thesis must embody the results of original work in analysis, or research. †*Twenty-two hours a week for eighteen weeks.* Spring term. Prof. Aubert.

Ch 23. Organic Chemistry.—A continuation of course 8. *Five hours a fortnight for eighteen weeks.* Prof. Aubert.

Ch 24. Technical Chemistry.—General processes of technical chemistry, and selected subjects including the principal manufactured products of special interest. *Five hours a fortnight for eighteen weeks.* Spring term. Prof. Aubert.

NATURAL HISTORY.

Professor Harvey; Mr. Merrill.

Nh 1. Cryptogamic Botany.—A detailed study of about thirty type forms. Special attention is given to useful and injurious fungi, to fungicides and spraying apparatus. Students collect specimens and prepare an herbarium.

The text-book is Bessey's Botany. *Five hours a fortnight for eighteen weeks.* Fall term. Prof. Harvey.

Nh 2. Laboratory Botany.—The use of the microscope, micrometers, camera lucida and microtome; the preparation of slides; the analysis, description, and classification of cryptogams, and their preparation for the herbarium. †*Two hours a week for sixteen weeks.* Fall term. Prof. Harvey; Mr. Merrill.

Nh 3. Advanced Physiology.—Lectures on the anatomy, physiology, hygiene and pathology of the human body. *Five hours a fortnight for eighteen weeks.* Spring term. Prof. Harvey.

Nh 4. Laboratory Physiology.—Examination of skeleton, manikin, charts, models, microscopic slides, and the dissection of lower animals. †*Two hours a week for eighteen weeks.* Spring term. Prof. Harvey.

Nh 5. Invertebrate Zoology.—The detailed study of type forms of all the branches. The student uses the compound microscope, makes dissections and careful drawings, and classifies the forms studied. *Five hours a fortnight for eighteen weeks.* Fall term. Prof. Harvey.

Nh 6. Laboratory Zoology.—Supplementary to course 5. †*Five hours a week for eighteen weeks.* Fall term. Mr. Merrill.

Nh 7. Helminthology.—A course in zoology with especial attention to animal parasites. †*Four hours a week for eighteen weeks.* Spring term. Prof. Harvey.

Nh 8. Comparative Vertebrate Zoology.—A comparative study of type forms of vertebrate animals. Special attention is given to the zoology of the domestic animals.

The text-book is Packard's Zoology. *Seven hours a fortnight for eighteen weeks.* Fall term. Prof. Harvey; Mr. Merrill.

Nh 9. Laboratory Zoology.—Museum work; study of charts, and models; dissections of a fish, frog, turtle, bird, and rat; methods of preparing specimens for collections. †*Four hours a week for eighteen weeks.* Spring term. Prof. Harvey.

Nh 10. Entomology.—The anatomy, physiology, classification, and economic importance of insects.

The text-books are Smith's Economic Entomology, and Comstock's Entomology. *Five hours a fortnight for eighteen weeks.* Spring term. Prof. Harvey.

Nh 11. Geology.—Special attention is given to the origin and formation of soils, to the method of conducting a geological survey, and to the geology of Maine.

The text-book is Scott's Introduction to Geology. *Five hours a fortnight for eighteen weeks.* Fall term. Prof. Harvey.

Nh 12. Human Anatomy.—A detailed study of the human skeleton. Examination of a manikin showing details of the respiratory, digestive, circulatory, reproductive, depurgatory, nervous, and muscular systems, and of the organs of the special senses.

The text-book is Gray's Anatomy. *Five hours a fortnight for eighteen weeks.* Spring term. Prof. Harvey.

Nh 13. Botany.—An exhaustive study of some phenogamic order together with a prepared collection of the Maine species. †*Five hours a week for eighteen weeks.* Fall term. Prof. Harvey.

Nh 14. Botany.—An exhaustive study of some lesser group of cryptogams, or the life history of some species. †*Five hours a week for eighteen weeks.* Spring term. Prof. Harvey.

Nh 15. Zoology.—History and principles of Zoology.

† *Five hours a week for eighteen weeks.* Fall term. Prof. Harvey.

Nh 16. Zoology.—A detailed study of some small group of animals, or the history of some species. †*Five hours a week for eighteen weeks.* Spring term. Prof. Harvey.

AGRICULTURE.

PROFESSOR WOODS; PROFESSOR GOWELL; PROFESSOR MERRILL; PROFESSOR RUSSELL.

Ag 1. BIOLOGICAL CHEMISTRY.—Lectures and recitations on the chemical changes in nature important to agriculture, the composition of air, soils, natural waters, and plants, the sources and assimilation of plant food, and the chemical processes and methods of investigation by which these subjects are studied.

The text-book is Johnson's How Crops Grow. *Five hours a fortnight for eighteen weeks.* Fall term. PROF. MERRILL.

Ag 2. BIOLOGICAL CHEMISTRY.—A continuation of course 1. Lectures and recitations in physiological chemistry, including the composition of the animal body, the composition of food materials, the chemical changes involved in the digestion and assimilation of food; also the chemistry of milk and dairy products, and the chemical processes and methods of investigation by which these subjects are studied.

The text-book is Arthus's Chimie Physiologique. *Five hours a week for eighteen weeks.* Spring term. PROF. MERRILL.

Ag 3. AGRICULTURAL CHEMISTRY.—Lectures on the origin, composition, preparation and use of commercial fertilizers, the supply, composition, care and use of farm manures, and the general considerations which pertain to the maintenance of soil fertility. *Five hours a fortnight for nine weeks.* Fall term. PROF. WOODS.

Ag 4. AGRICULTURAL PHYSICS.—Lectures on the relation of soils to heat and moisture, the mechanical condition of soils best suited to plant growth, and the objects to be gained by cultivation. *Five hours a fortnight for nine weeks.* Spring term. PROF. WOODS.

Ag 5. AGRICULTURAL ENGINEERING.—Lectures on farm drainage, irrigation, water supply for stock and household, farm implements and machinery, handling crops, and construction of farm buildings, sites, etc. *Five hours a fortnight for nine weeks.* Spring term. PROF. GOWELL.

Ag 6. Stock Feeding.—Lectures on the production of cattle foods and their composition, on formulating rations for milk and meat production, and application of the lectures to the animals in the herd.

The text-book is Henry's Feeds and Feeding. *Five hours a week for seven weeks.* Spring term. Prof. Gowell.

Ag 7. Dairying.—Lectures upon the formation and composition of milk; sources of infection; bacteria and their relation to dairying; ferments and their effects.

The text-books are Grotenfelt and Woll's Principles of Modern Dairy Practice, and Stewart's Dairyman's Manual. *Five hours a fortnight for nine weeks.* Spring term. Prof. Gowell.

Ag 8. Stock Breeding.—Lectures upon animal reproduction, the principles of breeding, and the means of improvement and development. Practice is given in judging animals by a scale of points.

The text-books are Miles's Cattle Breeding, and Saunder's Horse Breeding. *Five hours a week for seven weeks.* Spring term. Prof. Gowell.

Ag 9. Poultry Industry.—Lectures, with practice in handling poultry, and judging by a scale of points; in breeding; in hatching by natural and artificial processes; and in the use of machinery. Caponizing, and the construction and arrangement of buildings receive careful attention. *Five hours a week for four weeks.* Spring term. Prof. Gowell.

Ag 10. Dairy Practice.—The treatment and handling of milk and cream; milk testing for fat and other solids; aëration, pasteurization and sterilization of milk and cream; the application of acid tests and ferments to butter and cheese making; operating and caring for the boiler, engine, gravity creamers, centrifugal separators, churns, workers, vats, presses, and the making, curing and judging of butter and cheese, together with the business management of factories and creameries. Each student must provide himself with two suits of clothes made of white drilling. †*Seven hours a week for twelve weeks.* Spring term. Prof. Gowell.

Ag 11. Veterinary Science.—Lectures, demonstrations and clinics, illustrated by models, natural preparations, and living animals. *Five hours a fortnight for eighteen weeks.* Spring term. Prof. Russell.

Ag 12. Dissecting.—A brief course intended to make the student familiar with the location and appearance of the more important organs of the animal body. †*Seven hours a week for six weeks.* Spring term. Prof. Russell.

Ag 13. Bacteriology.—Methods of cultivating bacteria, the morphological and biological character of bacteria and fungi, particularly of those relating to disease, and of those of importance from an economic standpoint, the methods of making biological examinations of air, water, etc. During the time given to laboratory work, exercises in this course will be held every day, and the number of exercises will be correspondingly decreased. The instructor will arrange for an exchange of time with other laboratory courses. †*Five hours a week for nine weeks.* Spring term. Prof. Russell.

Ag 14. Animal Histology.—Dissecting and the preparation of the most important tissues and organs, accompanied with lectures and recitations. †*Ten hours a week for nine weeks.* Spring term. Prof. Russell.

Ag 15. Laboratory Bacteriology.—An advanced course. †*Ten hours a week for nine weeks.* Spring term. Prof. Russell.

HORTICULTURE.

Professor Munson; Mr. Merrill.

Ht 1. General Botany.—The structure and functions of the organs of plants; the development and relationship of the leading groups. Lectures, supplemented by laboratory work in the greenhouses and the field.

Gray's School and Field Book of Botany is used for reference. †*Five hours a week for eighteen weeks.* Spring term. Prof. Munson; Mr. Merrill.

Ht 2. Pomology.—The economic importance, methods of culture, and marketing of fruits; the principles and practice of spraying plants. Lectures. *Five hours a fortnight for nine weeks.* Spring term. Prof. Munson.

Ht 3. Olericulture, or Vegetable Gardening.—The history and uses of leading garden vegetables, with directions for their culture in the field and under glass. Lectures and practical demonstrations. *Five hours a fortnight for nine weeks.* Spring term. Prof. Munson.

Ht 4. Plant Variation.—A discussion of the underlying principles of horticulture. The origin and distribution of cultivated plants; their variation as affected by soil, climate, and cultivation; a systematic study of plant breeding, including the methods and effects of crossing, the principles of selection, and the influence of heredity. Students in this course must have taken course 1. *Five hours a fortnight for nine weeks.* Fall term. Prof. Munson.

Ht 5. Landscape Gardening.—The principles of landscape art and their application. *Five hours a fortnight for nine weeks.* Fall term. Prof. Munson.

Ht 6. Laboratory Horticulture.—The propagation and culture of plants, the construction and management of forcing structures, and the making of plans for rural improvements. †*Four hours a week for eighteen weeks.* Spring term. Prof. Munson.

Ht 7. Laboratory Horticulture.—A continuation of course 6. †*Five hours a week for eighteen weeks.* Fall term. Prof. Munson.

Ht 8. Histology of Plants.—A description and comparison of tissues, with investigation of the minute anatomy of vegetable organs, and studies in the phenomena of cell development and fertilization.

Goodale's Physiological Botany is used for reference. †*Five hours a week for nine weeks.* Spring term. Prof. Munson.

Ht 9. Plant Breeding.—A systematic study of the amelioration of plants by cultivation. Lectures and investigations concerning: (1) The fact and philosophy of variation; the causes of individual differences, the choice and fixation of varieties. (2) The philosophy of the crossing of plants; the limits of crossing; the function of a cross. (3) How domestic varieties originate; the influence of heredity; the principles of selection.

Bailey's Plant Breeding, Darwin's Animals and Plants under Domestication, and Darwin's Cross and Self Fertilization in the Vegetable Kingdom, are used for reference. *Five hours a fortnight for eighteen weeks.* Fall term. Prof. Munson.

Ht 10. Plant Breeding.—A continuation of course 9.

Five hours a fortnight for eighteen weeks. Spring term. Prof. Munson.

PHARMACY.

Assistant Professor Jackman.

Pm 1. Physical and Official Pharmacy.—The history of pharmacopœias, dispensatories, etc.; weights and measures, specific gravity, the pharmaceutical uses of heat, distillation, solution, filtration, etc.; official preparations; pharmaceutical problems, involving percentage solutions, parts by weight, and measure, chemical principles and equations, actual pharmacy operations.

The text-book is Remington's Practice of Pharmacy. *Five hours a week for eighteen weeks.* Fall term.

Pm 2. Inorganic, Organic, and Extemporaneous Pharmacy.—The elements, the official salts, and inorganic acids, their preparation and classification. Organic compounds, their classification, official preparations; official drugs of the Materia Medica classified according to their proximate principles, the preparations of these drugs, etc., animal preparations. Extemporaneous pharmacy; the principles of dispensing, store management, etc.

The text-book is Remington's Practice of Pharmacy. *Five hours a week for eighteen weeks.* Fall term.

Pm 3. Laboratory Pharmacy.—Official preparations and tests. The operations of manufacturing pharmacy, including the preparation of granular and scale salts, infusions, syrups, tinctures, etc. Official tests of chemicals, drugs, and preparations, for identity, strength, adulteration, etc.

The text-book is Remington's Practice of Pharmacy, or the U. S. Pharmacopœia. †*Ten hours a week for eighteen weeks.* Fall term.

Pm 4. Pharmacopœia and Prescriptions.—A complete review of the pharmacopœia, with special reference to the chemical and pharmaceutical principles involved in processes and preparations; critical examination of prescriptions from actual files, with reference to inelegance, physiological, pharmaceutical, and chemical incompatibility; doses; methods and order of compounding, etc.

The text-book is Remington's Practice of Pharmacy. *Three hours a week for eighteen weeks.* Spring term.

Pm 5. Inorganic Pharmacognosy.—Official and common names; practical exercises in the identification of specimens.

The text-book is the Era Key to the U. S. Pharmacopœia. *Five hours a fortnight for eighteen weeks.* Fall term.

Pm 6. Organic Pharmacognosy.—Official and common names, practical exercises.

The text-book is the Era Key to the U. S. Pharmacopœia. *Four hours a week for eighteen weeks.* Spring term.

Pm 7. Materia Medica.—Chemicals and drugs, their nature, uses, classification, therapeutic action, and doses; poisons, and antidotes.

The text-book is Potter's Materia Medica. *Five hours a fortnight for eighteen weeks.* Fall term.

Pm 8. Thesis Work.—The thesis must embody the results of original work in analysis, or research. †*Ten hours a week for eighteen weeks.* Spring term.

CIVIL ENGINEERING.

PROFESSOR GROVER; MR. WESTON; MR. HAMLIN.

Ce 1. PLANE SURVEYING.—Recitations on the general principles of land surveying, the laying out of land, the dividing of land, surveying of public lands, direct leveling, and the variation of the magnetic needle.

The text-book is Raymond's Surveying. *Five hours a fortnight for eighteen weeks.* Spring term. MR. WESTON.

Ce 2. FIELD WORK IN SURVEYING.—The uses of the chain, compass, transit, and level. Instruments are adjusted, original surveys made, and old lines retraced. Deeds are examined, and descriptions of property traced back in the Penobscot County registry of deeds. Plats are prepared of the surveys made in the field. †*Four hours a week for eighteen weeks.* Spring term. MR. WESTON; MR. HAMLIN.

Ce 3. RAILROAD ENGINEERING.—Lectures and recitations on the theory of railroad curves, switches, turnouts and slope stakes, the calculation of earthworks, and the resistance to trains offered by grades and curves, and the theory of economic location.

The text-book is Nagle's Field Engineering. *Five hours a fortnight for eighteen weeks.* Fall term. MR. WESTON.

Ce 4. RAILROAD WORK.—The location and detailed survey of a railroad several miles long. The curves are laid out, levels taken, and all the necessary measurements made to enable the student to compute the excavations and embankments and estimate the cost of construction. †*Five hours a week for eighteen weeks.* Fall term. MR. WESTON; MR. HAMLIN.

Ce 5. HIGHWAY ENGINEERING.—The location, construction, and improvement of country roads under different conditions of soil, climate, and traffic. *One hour a week for eighteen weeks.* Fall term. MR. WESTON.

Ce 6. MECHANICS.—The principles of statics; the algebraic and graphic solution of statical problems, including simple trusses; exercises in finding the moment of inertia, center of gravity, the shearing force and bending moment.

The text-book is Church's Mechanics of Engineering. *Five hours a week for eighteen weeks.* Fall term. Mr. Weston.

Ce 7. Mechanics.—A continuation of course 6, including the principles of dynamics. *Five hours a week for eighteen weeks.* Spring term. Mr. Weston.

Ce 8. Sanitary Engineering.—Lectures on land drainage, drainage of houses and towns, plumbing of houses, sewerage of towns and cities, and the ventilation of houses.

The text-book is Merriman's Sanitary Engineering. *Five hours a fortnight for eighteen weeks.* Fall term. Prof. Grover.

Ce 9. Higher Surveying.—The plane table, the solar compass as applied to the survey of public lands, stadia measurements, topographical surveying, the elements of geodesy, the measurement of base lines, calculation of a system of triangulation. †*Ten hours a week for eight weeks.* Spring term. Prof. Grover; Mr. Hamlin.

Ce 10. Hydraulics.—The weight, pressure, and motion of water; the flow of water through orifices and pipes; weir gauging; the flow of water in open channels, mains, and distribution pipes; distribution systems; the construction of water works for towns and cities.

The text-book is Church's Mechanics of Engineering. *Five hours a fortnight for eighteen weeks.* Fall term. Prof. Grover.

Ce 11. Hydraulics Field Work.—The measurement of the flow of rivers is illustrated by the application of the current meter and the various forms of floats to the Penobscot River or some of its large branches. The department is well supplied with apparatus. †*Seven hours a week for nine weeks.* Fall term. Prof. Grover.

Ce 12. Structures.—A detailed study of the properties of materials used in engineering structures; their resistance to bending, breaking, extension and compression, under the various conditions of practice; the theory of stresses in framed structures; the usual systems of loading; and the principles of designing.

Merriman's Mechanics of Materials, Johnson's Framed Structures, and Merriman's Roofs and Bridges, Part III, are used for reference. *Five hours a week for eighteen weeks.* Fall term. Prof. Hamlin.

Ce 13. Structures.—A continuation of course 12; including the study of problems in connection with masonry structures; natural and artificial foundations; the stability of dams and retaining walls; the designing of bridge piers and abutments; the theory of the masonry arch.

The text-book is Baker's Masonry Construction. *Five hours a week for eighteen weeks.* Spring term. Prof. Grover.

Ce 14. Designing.—Designs for several of the common types of wooden and steel structures, and preparation of drawings for the shop. †*Seven hours a week for nine weeks.* Fall term. Prof. Grover; Mr. Hamlin.

Ce 15. Designing and Thesis Work.—A continuation of course 14 and the preparation of a thesis. †*Twelve hours a week for eighteen weeks.* Spring term. Prof. Grover; Mr. Hamlin.

Ce 16. Hydraulic Engineering.—Rainfall, evaporation, and stream-flow. The collection, purification, and distribution of water for city supplies. Water meters, water wheels and motors. The development and utilization of water power. *Five hours a fortnight for eighteen weeks.* Fall term. Prof. Grover.

Ce 17. Hydraulic Engineering.—A continuation of course 16. *Five hours a fortnight for eighteen weeks.* Spring term. Prof. Grover.

MECHANICAL ENGINEERING.

Professor Flint; Mr. Walker; Mr. Steward.

Me 1. Carpentry.—The care and sharpening of tools, the squaring of stock, and taking work out of wind; practice in making different joints in soft and hard wood; wood turning. The charge for material is $5.00 a term. †*Seven hours a week for eighteen weeks.* Fall term. Mr. Walker.

Me 2. Forge Work.—Drawing and upsetting; the welding of straight pieces of various sizes, the making of rings, and chain links, the welding of eye bolts and bolt heads, etc.; the making of a steel punch, cold chisels, and a set of lathe tools, for use in the machine shop; foundry work. The student must furnish a forging hammer, calipers, and scale, at a cost of $2.50. The charge for materials is $5.00 a term. †*Five hours a week for eighteen weeks.* Spring term. Mr. Walker.

Me 3. Kinematics.—Methods of transmitting and transforming motion, illustrated by the solution of practical problems; the construction of cams, lobed wheels, and gear teeth, cycloidal, and involute gears.

The text-book is Jones's Kinematics. †*Five hours a week for eighteen weeks.* Spring term. Mr. Walker.

Me 4. Machine Work.—Exercises in filing and chipping; lathe work, drilling, boring and threading in the lathe; making cut gears, machinist taps, and finished bolts; exercises on the planer and shaper. Each student provides himself with center gauge, steel scale, and files, at a cost of $2.50. The charge for materials is $5.00 a term. Students will be given credit for work in commercial shops on presentation of satisfactory proof. *The time devoted to machine work varies.* Mr. Steward.

Me 5. Analytic Mechanics.—Composition and resolution of forces, center of gravity, friction, virtual velocities, elementary machines, work, energy, moment of inertia.

The text-book is Wood's Analytic Mechanics. *Five hours a week for eighteen weeks.* Fall term. Mr. Walker.

Me 6. Analytic Mechanics.—A continuation of course 5. *Five hours a week for eight weeks.* Spring term. Mr. Walker.

Me 7. Applied Mechanics.—Stress, its resultants and centers; moments, moments of inertia; strength and deflection of beams; analysis of framed structures for internal stresses under uniform and concentrated loads; graphic statics.

The text-book is Rankine's Applied Mechanics. *Five hours a week for ten weeks.* Spring term. Mr. Walker.

Me 8. Applied Mechanics.—A continuation of course 7. Lectures. *Five hours a fortnight for eighteen weeks.* Fall term. Mr. Walker.

Me 9. Machine Design.—Rules and formulas are applied to machines of standard manufacture for comparison. The student designs a speed lathe, and makes the working designs. *Seven hours a fortnight for eighteen weeks.* Spring term. Prof. Flint.

Me 10. Hydro-Mechanics.—The behavior of liquids in motion and under pressure, flowing through pipes and in open channels, with problems.

The text-book is Bowser's Hydro-Mechanics. *Five hours a fortnight for eighteen weeks.* Fall term. Prof. Flint.

Me 11. Heat and Steam.—The characteristics of steam and its behavior in pipes, boilers, and particularly in the cylinders of engines; problems involving the properties of saturated steam; the calculation of steam pipes and safety valves; the design of a boiler suited to run an engine under given conditions, and the detail drawings.

The text-book is Benjamin's Heat and Steam. *Five hours a fortnight for eighteen weeks.* Fall term. Prof. Flint.

Me 12. Steam Boiler Design.—Drawings of the more important parts of the design worked out in course 11. †*Twelve hours a week for eighteen weeks.* Fall term. Prof. Flint.

Me 13. Testing.—Tests of steam gauges, boilers, etc.; tests of different metals under tension and compression. *Five hours a fortnight for eighteen weeks.* Spring term. Prof. Flint.

Me 14. Steam Engine.—The steam engine as a source of power; the design, proportions and working of engine cylinders, steam pipes, and ports; engine valves, eccentrics, adjustable eccentrics; the locomotive link motion with its connections; numerous problems on the slide valve and link motion; the calculation of details of an engine.

The text-book is Whitham's Steam Engine Design. *Seven hours a fortnight for eighteen weeks.* Spring term. Prof. Flint.

Me 15. Steam Engine Design.—Drawings of the parts worked out in course 14; the setting of valves by means of the indicator; the calculation of horse power; the consumption of water and coal, etc. †*Fifteen hours a week for nine weeks.* Spring term. Prof. Flint.

Me 16. Thesis Work.—The design of a piece of machinery. †*Fifteen hours a week for nine weeks.* Spring term. Prof. Flint.

Me 17. Design.—A course supplementary to Me 9, consisting of an original design of some piece of scientific apparatus; or, an original investigation of some engineering problem to be fully written up and presented to the department.
†*Five hours a week for eighteen weeks.* Fall term. Prof. Flint.

Me 18. Design.—A continuation of course 17.
†*Five hours a week for eighteen weeks.* Spring term. Prof. Flint.

ELECTRICAL ENGINEERING.

Professor Stevens; Mr. Dickinson; Mr. Manson.

Ee 1. Electricity and Magnetism.—This course continues the subject of electricity and magnetism begun in physics. Lectures are given, and laboratory methods and results are discussed with the class.
The text-book is Silvanus Thompson's Electricity and Magnetism. *Two hours a week for eighteen weeks.* Fall term. Mr. Dickinson.

Ee 2. Electricity and Magnetism.—A continuation of course 1; the dynamo and apparatus connected with its operation.
The text-book is Hawkins and Wallis's The Dynamo. *Three hours a week for eighteen weeks.* Spring term. Mr. Dickinson.

Ee 3. Electrical Machinery.—Lectures on the theory and construction of dynamos, moters, etc. *Five hours a fortnight for eighteen weeks.* Fall term. Mr. Dickinson.

Ee 4. Electrical Engineering.—The designing, construction, and operating of alternating current machinery and the use of direct and alternating current machinery in lighting, and the transmission of power. *Five hours a week for nine weeks.* Spring term. Mr. Dickinson.

Ee 5. Electrical Design.—This course is similar to the course in machine design given to students in mechanical engineering. Each student is required to make the computations and complete drawings for a dynamo. †*Seven hours a week for eighteen weeks.* Fall term. Mr. Dickinson.

Ee 6. Electrical Design.—The problems involved in designing alternating current machinery, in the electrical transmission of power, and in the distribution of electric light. †*Ten hours a week for nine weeks.* Spring term. Mr. Dickinson.

Ee 7. Laboratory Electricity.—Tests of electrical instruments; experimental work with dynamos, motors, etc.; tests of efficiency; photometric tests of electric lamps; the practical management of the electric light plant. The charge for this course is $2.50. †*Five hours a week for eighteen weeks.* Fall term. Mr. Dickinson.

Ee 8. Theoretical Electricity.—Lectures on the mathematical theory of electrical instruments. This course will be varied from year to year. *Five hours a fortnight for nine weeks.* Spring term. Prof. Stevens.

Ee 9. Power Stations.—The selection and arrangement of power house machinery; methods of operation. Lectures. *Five hours a fortnight for eighteen weeks.* Fall term. Mr. Dickinson.

Ee 10. Shop Work.—The winding of armatures and magnets, the building up of transformer cores and the winding of transformers and impedance coils, the construction of condensers for alternating current circuits, construction of rheostats and bridges, tangent and ballistic galvanometers, ammeters and other measuring instruments, a standard cell, a secondary battery, the preparation of fuse wire and fuses, the construction of automatic switches and arc lamps. The charges for this course is $5.00. †*Five hours a week for sixteen weeks.* Not offered in 1898-99.

Ee 11. THESIS WORK.—A continuation of course 7. The student devotes a large part of his time to some special investigation selected as the subject for his graduating thesis. The charge for this course is $2.50. †*Fifteen hours a week for nine weeks.* Spring term. MR. DICKINSON.

Ee 10. TELEPHONY.—The theory and construction of the transmitter, receiver, and induction coil; the arrangement of instruments; the theory and practical construction of the line; the use of cables; the central exchange; wiring and details of switchboards, and other station apparatus; systems of construction; protective devices; use of storage cells; simultaneous telegraphy and telephony. *Five hours a fortnight for eighteen weeks.* MR. DICKINSON.

MILITARY SCIENCE AND TACTICS.

MR. WALKER.

Each man student is required to take military drill, unless physically unfit, and to attend recitations in military science.

The drill, course 1, occupies the first ten weeks of the fall term, and the last thirteen weeks of the spring term, one hour a day, and three days in the week, counting as one hour and a half in reckoning the student's total time. The remaining eight weeks in the fall term, and five weeks in the spring term, are given: by the senior class, to recitations in military science, course 4, three recitations a fortnight; by the junior class, to recitations in military science, course 3, three recitations a fortnight; by the sophomore class, to recitations in military science, course 2, three hours a fortnight; by the freshmen class, to mathematical drawing.

Mt 1. MILITARY DRILL.—(a.) School of the soldier, school of the company, school of the battalion, and extended order movements. (b.) Target practice at known distances up to six hundred yards. Marksman's buttons are awarded to cadets who qualify. (c.) Military signalling with flag, lantern, heliograph, and field telegraph. (d.) Band practice. †*Three hours a week for the first ten and last thirteen weeks of each year.*

Mt 2. Guard Duty.—Recitations on the Manual of Guard Duty. Required of sophomores. *Three hours a fortnight for thirteen weeks.*

Mt 3. Drill Regulations.—Recitations on U. S. Infantry Drill Regulations. Required of juniors. *Three hours a fortnight for ten weeks.*

Mt 4. Art of War.—Required of seniors.

The text-book is Mercur's Elements of the Art of War. *Three hours a fortnight for thirteen weeks.*

MOUNT VERNON HOUSE.

ORGANIZATION OF THE UNIVERSITY.

The University is divided into colleges, each offering several courses upon related subjects. The colleges are interdependent and together form a unit. Instruction in military science is given to all men students except those in the School of Law. The organization is as follows:

COLLEGE OF ARTS AND SCIENCES.

The Classical Course.
The Latin-Scientific Course,
The Scientific Course,
The Chemical Course,
The Preparatory Medical Course.

COLLEGE OF AGRICULTURE.

The Agricultural Course,
The Special Course in General Agriculture,
The Special Course in Horticulture,
The Special Course in Dairying,
The Agricultural Experiment Station.

COLLEGE OF ENGINEERING.

The Civil Engineering Course,
The Mechanical Engineering Course,
The Electrical Engineering Course.

COLLEGE OF PHARMACY.

The Pharmacy Course (four years).
The Short Course in Pharmacy (two years).

SCHOOL OF LAW.

EXPLANATION OF TABLES.—The college year is divided equally into a fall term and a spring term. The year of the School of Law is divided into three terms, the fall, winter, and spring terms, of eleven, ten, and eleven weeks respectively. For details see the calendar.

The quota of studies prescribed for each student is, for a minimum, seventeen hours, and for a maximum, twenty hours of class-room work each week, exclusive of declamations and themes. The tables are made so as to require, with the military work of three hours a fortnight, approximately twenty hours work each week. The numbers in the tables show the average number of hours a week given to each study. The number 2.5 means three hours one week and two the next. In making up the quota of studies, laboratory work and other exercises not requiring preparation count as half time—that is, two hours in the laboratory are counted as equivalent to one hour. The hours devoted to such studies are marked with a dagger (†) in the tables.

The capital letters and numerals preceding a study refer to the explanatory statements to be found on the pages given.

STUDIES OF THE FRESHMAN YEAR, ALL COURSES.*

For Declamations and Themes see page 33; for Military Science see page 67.

FALL TERM—18 WEEKS.	Hours.	SPRING TERM—18 WEEKS.	Hours.
Eh3, Rhetoric, p. 33	2.5	Eh4, Rhetoric, p. 34	2.5
M11, French, p. 35 or M15, German, p. 35 or Lt1, Latin, p. 37	(see note) 5.0	M12, French, p. 35 or M16, German, p. 35 or Lt2, Latin, p. 37	(see note) 5.0
Ms18, Algebra, p. 43	5.0	Ms1, Solid Geometry, p. 43, 8 w. Ms4, Trigonometry, p. 44, 10 w.	5.0
Dr1, Drawing, p. 47	†5.0	Dr2, Math Drawing, p. 47, 5 w.	†3.0
Dr2, Mathematical Drawing, p. 47, 8 w.	†3.0	Dr3, Mech. Drawing, p. 47 or Ht1, Botany, p. 56	†5.0
Ch1, General Chemistry, p. 48	2.5	Ch2, General Chemistry, p. 48	2.5
Ch3, Laboratory Chemistry, p. 49	†2.0	Ch4, Laboratory Chemistry, p. 49	†2.0

* Except School of Law.

NOTE. Students in the Latin-Scientific Course take Latin, other students take French or German.

THE COLLEGE OF ARTS AND SCIENCES.

The aim of this college is to furnish a liberal education and to afford opportunity for specialization along literary, philosophical, and general scientific lines. The college comprises:

1. The Classical Course.
2. The Latin-Scientific Course.
3. The General Science Course.
4. The Chemical Course.
5. The Preparatory Medical Course.

The Classical Course.

This course is planned for those who wish general culture. About two-thirds of the work is elective. The required work includes Greek, Latin, mathematics, English, French, German, chemistry, psychology, and political economy. After the freshman year Greek and Latin are elective. The student may arrange his course so as to give special attention to language, chemistry, natural science, mathematics, or physics. A graduate of this course will usually be able to complete the work of one of the technical courses in one year. This course will be opened to students in the fall of 1899.

Upon graduation the student receives the degree of Bachelor of Arts. Three years later, on proof of satisfactory advancement, and on presentation of a thesis embodying original work or investigation, he receives the degree of Master of Arts.

The Latin-Scientific Course.

This course is planned for the benefit of those who seek general rather than special training, with a view to preparing themselves for teaching, business, or further study. It differs from the usual classical course by omitting Greek. It requires an extensive study of modern languages, and permits a wide choice of elective work.

The required studies include Latin, English, and modern languages; mathematical and physical science; natural science; and political economy. Latin is not required after the freshman year. By a proper selection of elective studies, the student may give special attention to language, chemistry, natural science, mathematics, or physics.

Upon graduation the student receives the degree of Bachelor of Philosophy; three years later, on proof of satisfactory advancement, and on presentation of a thesis embodying original work or investigation, he receives the degree of Master of Philosophy.

STUDIES OF THE LATIN SCIENTIFIC COURSE.

For the Freshman Year see page 70; for Declamations and Themes see page 33; for Military Science see page 67.

SOPHOMORE YEAR.

FALL TERM—18 WEEKS.

Required.	Hours.
M11, French, p. 35 or M15, German, p. 35	5.0
Ps1, General Physics, p. 46 or Ps12, General Physics, p. 46	5.0 / 2.5

Elective.	
M11, French, p. 35	5.0
M15, German, p. 35	5.0
Lt3, Latin, p. 37	2.5
Ms6, Analytical Geometry, p. 44.	5.0
Others as in Scientific Course.	

SPRING TERM—18 WEEKS.

Required.	Hours.
M12, French, p. 35 or M16, German, p. 35	5.0
Ps2, General Physics, p. 46 or Ps13, General Physics, p. 46	2.5

Elective.	
Ms5 Analytical Geometry, p. 44,	2.5
M12, French, p. 35	5.0
M16, German, p. 35	5.0
Lt4, Latin, p. 37	2.5
Ps5, Laboratory Physics, p. 46	†5.0
Dr3, Mechanical Drawing, p. 47	†5.0
Ht1, Botany, p. 56	†5.0
Others as in Scientific Course.	

JUNIOR YEAR.

Required.	
Eh8, English Literature, p. 34	2.5
M11, French, p. 35 or M15, German, p. 35	5.0
Pl1, Psychology, p. 38	2.5

Elective.	
M13, French, p. 35	2.5
M17, German, p. 36	2.5
Lt5, Latin, p. 38	2.5
Others as in Scientific Course.	

Required.	
Eh9, English Literature, p. 34	2.5
M12, French, p. 35 or M16, German, p. 35	5.0
Pl2, Logic, p. 39	2.5

Elective.	
M14, French, p. 35	2.5
M18, German, p. 36	2.5
Lt6, Latin, p. 38	2.5
Cv3, American History, p. 39	2.0
Cv2, English History, p. 39	2.5
Others as in Scientific Course.	

SENIOR YEAR.

Required.	
Cv9, Constitutional Law and History, p. 40	5.0

Elective.	
Lt5, Latin, p. 38	2.5
Nh11, Geology, p. 53	2.5
Others as in Scientific Course.	

Required.	
Cv8, Political Economy, p. 39	5.0

Elective.	
Lt6, Latin, p. 38	2.5
Others as in Scientific Course.	

THE SCIENTIFIC COURSE.

This course is arranged for those who wish a broad general training, chiefly based upon the study of science, modern languages, and history. It furnishes an admirable preparation for executive positions in banking, commercial, or manufacturing establishments, or for teaching.

For graduates of modern language or English courses in the preparatory schools, it serves the same general purpose as does the classical course for the graduates of the classical preparatory course.

The work of the freshman year, consisting of English, modern languages, history, mathematics, drawing, chemistry, and botany, is required. After the freshman year, a large part of the work —varying from one-third at the beginning to three-fourths at the end—is elective. The required courses include analytical geometry, general physics, geology, French, German, English literature, English history, United States history, constitutional history, psychology, logic, and political economy. The elective studies may be selected to give the student a comprehensive view of the mathematical or natural sciences, or to give a specialized course in modern languages, mathematics, physics, or natural science.

Upon graduation the student receives the degree of Bachelor of Science; three years later, on proof of satisfactory advancement and on presentation of a thesis embodying original work or investigation, he receives the degree of Master of Science.

STUDIES OF THE SCIENTIFIC COURSE.

For the Freshman Year see page 70; for Declamations and Themes see page 33; for Military Science see page 67.

SOPHOMORE YEAR.

FALL TERM—18 WEEKS.

	Required.	Hours.
M11, M15,	French, p. 35 or German, p. 35	5.0
Ps1, Ps12,	General Physics, p. 46 or General Physics, p. 46	5.0 2.5
	Elective.	
Ch5,	Chemical Theory, p. 49	2.5
Ch14,	Qualitive Analysis, p. 50	†5.0
Ms6,	Analytical Geometry, p. 44,	5.0
Nh1,	Cryptogamic Botany, p. 51,	2.5
Nh2,	Laboratory Botany, p. 52	†2.0

SPRING TERM—18 WEEKS.

	Required.	Hours.
M12, M16,	French, p. 35, or German, p. 35	5.0
Ps2, Ps13,	General Physics, p. 46, or General Physics, p. 46,	2.5
Ps5,	Laboratory Physics, p. 46	†5.0
Ms5,	Analytical Geometry, p. 44,	2.5
	Elective.	
Eh5,	Anglo-Saxon, p. 34	2.5
Cv1,	General History, p. 39	2.5
Ms7,	Calculus, p. 44	5.0
Ms11,	Advanced Algebra, p. 45	2.5
Ch14,	Qualitative Analysis, p. 50,	†5.0
Ht8,	Histology of Plants, p. 57, 9 w.	†5.0
Ag13,	Bacteriology, p. 56, 9 w.	

JUNIOR YEAR.

	Required.	
Eh8,	English Literature, p. 34	2.5
M13, M17,	French, p. 35 or German, p. 36	2.5
P11,	Psychology, p. 38	2.5

	Required.	
Eh9,	English Literature, p. 34	2.5
M14, M18,	French, p. 35, or German, p. 36,	2.5
Cv3,	American History, p. 39	2.0
P12,	Logic, p. 39	2.5
Cv2,	English History, p. 39	2.5

JUNIOR YEAR—Concluded.

Elective.

M19, Spanish, p. 36 ..... 2.5
M111, Italian, p. 36 ..... 2.5
M113, Old French, p. 36..... 2.5
Cv4, Philosophy of History,p.39, 2.5
Cv11, International Law, p. 40... 2.5
Ms8, Calculus, p. 44 ..... 2.5
Ms12, Advanced Integral Calculus, p. 45..... 2.5
Ms20, Solid Analytical Geometry, p. 45..... 2.5
Ps8, Math. Physics, p. 47..... 2.5
Ps9, Adv. Lab. Physics, p. 47..... †5.0
Ps11, Electrical Measurements and Testing, p. 47..... †4.0
Ch14, Qualitative Analysis, p. 50, †5.0
Nh5, Invertebrate Zoology, p.52, 2.5
Nh6, Laboratory Zoology, p. 52, †5.0
Nh8, Comp. Vert. Zoology, p. 52, 3.5
Me5, Analytic Mechanics, p. 63.. 5.0
Ee1, Electricity and Magnetism, p. 65..... 2.0

Elective.

Eh9, European Literature, p. 34, 2.5
M110, Spanish, p. 36 ..... 2.5
M112, Italian, p. 36 ..... 2.5
M114, Old French, p. 36 ..... 2.5
Ms9, Descrip. Astronomy, p. 44, 2.5
Ms10, Practical Astronomy, p. 45, 2.5
Ms13, Adv. Integ. Calculus, p. 45, 2.5
Ms15, Differential Equations, p. 45 ..... 2.5
Ps7, Advanced Optics, p. 47..... 2.5
Ps10, Laboratory Physics, p. 47.. †5.0
Ch13, Mineralogy, p. 50..... †2.0
Ch14, Qualitative Analy., p. 50.. †5.0
Ch16, Quantitative Analy., p. 50.. †4.0
Nh7. Helminthology, p. 52..... †4.0
Nh9, Laboratory Zoology, p. 52, †4.0
Nh10, Entomology, p. 53 ..... 2.5
Me6, Analytic Mechanics, p.63, 8 w. } 5.0
Me7, Applied Mechanics, p. 63, 10 w. } 5.0
Ee2, Electricty and Magnetism, p. 65..... 3.0

SENIOR YEAR.

Required.

Cv9, Constitutional Law and History, p. 40 ..... 5.0

Elective.

Eh10, English Literature, p. 34 .. 2.5
Pl3, Hist. of Philosophy, p. 39, 2.5
Ms12, Advanced Integral Calculus, p. 45..... 2.5
Ms20, Solid Analytic Geometry, p. 45 ..... 2.5
Ms16, Practical Astronomy, p.45, 2.5
Nh11, Geology, p. 53..... 2.5

Required.

Cv8, Political Economy, p. 39... 5.0

Elective.

Eh11, English Literature, p. 34.. 2.5
Cv10, Municipal Law, p. 40..... 1.0
Cv12, Library Work, p. 40. ..... †5.0
Ms13, Adv. Integral Calculus, p. 45..... 2.5
Ms15, Differential Equations, p. 45..... 2.5
Ms17, Practical Astronomy, p. 45, 2.5
Nh3, Advan. Physiology, p. 52.. 2.5
Nh4, Lab. Physiology, p. 52 ..... †2.0

THE CHEMICAL COURSE.

This course is designed for those who wish to become professional chemists and analysts, managers, or chemists of industries which require an extensive knowledge of chemistry, or teachers of chemistry. Attention is given to the preparation of students for the work of the agricultural experiment stations. In addition to a theoretical knowledge of chemistry, the student acquires, in his biological studies, knowledge of comparative anatomy, and of the lower forms of life, and in his work in the chemical laboratory, facility in the manipulation of chemical apparatus and the microscope.

The lectures and recitations are closely associated with practical work in the laboratories where the student, under the guidance of the instructors, becomes acquainted with the methods and apparatus of qualitative and quantitative analysis and metallurgy. The student is drilled in the use of chemical apparatus, in accurate observation, and in careful interpretation of directions.

Upon graduation the student receives the degree of Bachelor of Science; three years later, on proof of satisfactory advancement and on presentation of a thesis embodying original work or investigation, he receives the degree of Master of Science.

STUDIES OF THE CHEMICAL COURSE.

For the Freshman Year see page 70; for Declamations and Themes see page 33; for Military Science see page 67.

SOPHOMORE YEAR.

FALL TERM—18 WEEKS.	Hours.	SPRING TERM—18 WEEKS.	Hours.
M11, French, p. 35 or M15, German, p. 35.	5.0	M12, French, p. 35 or M16, German, p. 35	5.0
Ps1, General Physics, p. 46 or Ps12, General Physics, p. 46	5.0 2.5	Ps2, General Physics, p. 46 or Ps13, General Physics, p. 46	2.5
Ch5, Chemical Theory, p. 49	2.5	Ps5, Laboratory Physics, p. 46	†5.0
Ch14, Qualitative Analysis, p. 50	†10.0	Ms5, Analytic Geometry, p. 44	2.5
Nh1, Cryptogamic Botany, p. 51.	2.5	Ch6, Inorganic Chemistry, p. 49.	2.5
Nh2, Laboratory Botany, p. 52	†2.0	Ch18, Quantitative Analysis p. 50,	†7.0

JUNIOR YEAR.

Pl1, Psychology, p. 38	2.5	Pl2, Logic, p. 39	2.5
M17, German, p. 36	2.5	M18, German, p. 36	2.5
Ch7, Inorganic Chemistry, p. 49	2.5	Ch8, Organic Chemistry, p. 49	2.5
Ch10, Chemical Readings, p. 49	1.0	Ch13, Mineralogy, p. 50	†2.0
Ch18, Quan. Analysis, p. 50	†10.0	Ch19, Volumetric Analysis and Assaying, p. 51	†13.0
Ch20, Agricultural Analysis, p. 51	†5.0		
Nh5, Invertebrate Zoology, p. 52 or Ee1, Electricity and Magnetism, p. 65 (2 hrs.) or Eh8, English Literature, p. 34	2.5	Nh10, Entomology, p. 53 or Eh9, English Literature, p. 34	2.5

SENIOR YEAR.

Cv9, Constitutional Law and History, p. 40	5.0	Cv8, Political Economy, p. 39	5.0
Ch12, Organic Chemicals, p. 50	†5.0	Ch11, Laboratory Processes, p. 50,	2.5
Ch21, Toxicology and Biological Analysis, p. 51	†10.0	Ag13, Bacteriology, p. 56, 5 w. Ch22, Thesis Work, p. 51, 13 w.	†15.0
Ch23, Organic Chemistry, p. 51	2.5	Ch24, Industrial Chemistry, p. 51,	2.5
Nh11, Geology, p. 53	2.5		

THE PREPARATORY MEDICAL COURSE.

This course is arranged to meet the needs of those students who purpose becoming physicians, but also offers to those who

are interested in the biological sciences a very desirable training for teaching or investigation.

The course, outside of certain general subjects, including mathematics, language, and philosophy, consists mainly of two lines of study, chemical and biological. The chemical studies of the course, general and special, are continued for three and a half years, and include advanced inorganic and organic chemistry, biological chemistry, qualitative and quantitative analysis, toxicology, and the testing of drugs. The biological studies begin in the freshman year and continue throughout the course. They include botany, both phænogamic and cryptogamic, invertebrate zoology, comparative vertebrate zoology, human anatomy, advanced physiology, bacteriology, plant histology, and animal histology.

Important features of the course are: a study of animal parasites, particularly those affecting the human subject; a free use of the microscope in studying vegetable and animal tissues; experience in identifying and cultivating pathogenic organisms; a thorough consideration of the chemistry of foods, of the animal body, and of digestion and metabolism. Students graduated in this course are received into medical schools without examination, and by many of the best schools are given credit for the work of the first year.

Upon graduation the student receives the degree of Bachelor of Science; three years later, on proof of satisfactory advancement and on presentation of a thesis embodying original work or investigation, he receives the degree of Master of Science.

STUDIES OF THE PREPARATORY MEDICAL COURSE.

For the Freshman Year see page 70; for Declamations and Themes see page 33; for Military Science see page 67.

Sophomore Year.

Fall Term—18 weeks.	Hours.	Spring Term—18 weeks.	Hours.
Ml1, French, p. 35, or Ml5, German, p. 35,	5.0	Ml2, French, p. 35, or Ml6, German, p. 35,	5.0
Ps1, General Physics, p. 46, or Ps12, General Physics, 46	5.0 / 2.5	Ps2, General Physics, p. 46, or Ps12, General Physics, p. 46	2.5
Ch5, Chemical Theory, p. 49.....	2.5	Ps5, Laboratory Physics, p. 46...	†5.0
Ch14, Qualitive Analysis, p. 50...	†6.0	Ch6, Inorganic Chemistry, p. 49,	2.5
Nh1, Cryptogamic Botany, p. 51,	2.5	Ch15, Qualitative Analysis, p. 50,	†8.0
Nh2, Laboratory Botany, p. 52...	†2.0	Ht8, Histology of Plants, p. 57, 9 w. Ag13, Bacteriology, p. 56, 9 w.	†5.0

Junior Year.

M17, German, p. 36..... 2.5
P11, Psychology, p. 38 ..... 2.5
Ch9, Organic Chemistry, p. 49.... 2.5
Ch17, Quantitative Analy., p. 50.. †6.0
Nh5, Invertebrate Zoology, p. 52, 2.5
Nh6, Laboratory Zoology, p. 52.. †5.0
Ag1, Biological Chemistry, p. 54, 2.5

P12, Logic, p. 39..... 2.5
Cv2, English History, p. 39..... 2.5
Ch21, Toxicology and Biological Analysis, p. 51 .....†12.0
Nh7, Helminthology, p. 52..... †4.0
Ag2, Biological Chemistry, p. 54, 5.0

Senior Year.

Cv9, Constitutional Law and History, p. 40..... 5.0
Nh8, Comparative Vertebrate Zoology, p. 52 .... 3.5
Nh11, Geology, p. 53. ..... 2.5
Pm3, Laboratory Pharmacy, p. 59, †10.0
Pm7, Materia Medica, p. 59 ..... 2.5

Cv8, Political Economy, p. 39.... 5.0
Nh3, Advanced Physiology, p. 52, 2.5
Nh4, Laboratory Physiology, p. 52, †2.0
Nh12, Human Anatomy, p. 53.... 2.5
Ag11, Veterinary Science, p. 56.. 2.5
Ag14, Animal Histology, p. 56, 9w. } †10.0
Ag15, Lab. Bacteriology, p. 56, 9w. }

COLLEGE OF AGRICULTURE.

The aim of the College of Agriculture is to prepare young men to become farmers, teachers, or investigators of agricultural subjects. The instruction is arranged; first, to secure for the student that intellectual development which is a condition fundamental to the highest success in any calling, and second, to give the necessary technical knowledge. The college comprises:

1. The Agricultural Course.
2. The Special Courses in General Agriculture.
3. The Special Course in Horticulture.
4. The Special Course in Dairying.
5. The Agricultural Experiment Station.

The Agricultural Course.

This course is broadly educational, particularly in the natural sciences and their relations to human needs and activities, and gives an admirable preliminary training for either business or professional life. The distinctive studies are along technical lines, but the branches pertaining to general culture, and to social and civil relations, occupy an important place.

The theoretical instruction, especially that of the last two years, is associated with practical work and observation. Practice is combined with theory whenever it is necessary for the demonstration of a principle or involves skilled labor, but the student's time is not consumed in merely manual operations.

Upon graduation the student receives the degree of Bachelor of Science; three years later, on proof of satisfactory advancement and on presentation of a thesis embodying original work or investigation, he receives the degree of Master of Science.

STUDIES OF THE AGRICULTURAL COURSE.

For the Freshman Year see page 70; for Declamations and Themes see page 33; for Military Science see page 67.

SOPHOMORE YEAR.

FALL TERM—18 WEEKS	Hours.	SPRING TERM—18 WEEKS.	Hours.
M11, French, p. 35 or M15, German, p. 35	5.0	M12, French, p. 35 or M16, German, p. 35	5.0
Ps1, General Physics, p. 46 or Ps12, General Physics, p. 46	5.0 / 2.5	Ps2, General Physics, p. 46 or Ps13, General Physics, p. 46	2.5
Ch5, Chemical Theory, p. 49	2.5	Ps5, Laboratory Physics, p. 46	†5.0
Ch14, Qualitative Analysis, p.50,	†6.0	Ch6, Inorganic Chemistry, p. 49	2.5
Nh1, Cryptogamic Botany, p. 51,	2.5	Ch16, Quan. Analysis, p. 50.	†8.0
Nh2, Laboratory Botany, p. 52	†2.0	Ht8, Hist. of Plants, p. 57, 9 w. Ag13, Bacteriology, p. 56, 9 w.	†5.0

JUNIOR YEAR.

M17, German, p. 36	2.5	P12, Logic, p. 39	2.5
P11, Psychology, p. 38	2.5	Cv2, English History, p. 39	2.5
Ch9, Organic Chemistry, p. 49	2.5	Nh10, Entomology, p. 53	2.5
Ch20, Agricultural Analysis, p.51,	†6.0	Ag2, Biological Chemistry, p. 54,	5.0
Nh5, Invertebrate Zoology, p.52,	2.5	Ag4, Agricultural Physics, p. 54, 9 w. / Ag5, Agricultural Engineering p. 54, 9 w.	2.5
Nh6, Laboratory Zoology, p. 52	†5.0		
Ag1, Biological Chemistry, p. 54	2.5	Ht2, Pomology, p. 57, 9 w. Ht3, Olericulture, p. 57, 9 w.	2.5
		Ht6, Laboratory Hort. p. 57	†4 0

SENIOR YEAR.

Cv9, Constitutional Law and History, p. 40	5.0	Cv8, Political Economy, p. 39	5.0
Nh8, Comparative Vertebrate Zoology, p. 52	3.5	Nh3, Advanced Physiology, p. 52,	2.5
Nh11, Geology, p. 53	2.5	Ag6, Stock Feeding, p. 55, 7 w. Ag8, Stock Breeding, p. 55, 7 w. Ag9, Poultry Industry, p.55,4 w.	5.0
Ag3, Agricultural Chemistry, p. 54, 9 w. / Ag7, Dairying, p. 55, 9 w.	2.5	Ag11, Veterinary Science, p. 56	2.5
Ht4, Plant Variation, p. 57, 9 w. / Ht5, Landscape Gardening, p. 57, 9 w.	2.5	Ag12, Dissecting, p. 56, 6 w. Ag10, Dairy Practice, p. 55, 12 w.	†7.0
Ht7, Lab. Horticulture, p. 57	†5.0		

THE SHORT COURSES IN AGRICULTURE.

For those who can meet the expense, the investment of time and money necessary to complete the four years' course, is most wise, but there are many young men who conclude that they cannot command so much money and time, and to such the Short Courses in Agriculture are offered. In addition to the regular four years' course, students are admitted to special courses in agriculture of such length as their time will allow, and of such breadth as their previous training will permit. Stu-

dents will be admitted to these short courses, with the exception of the winter course of six weeks in dairying, at any time during the college year.

For admission to these courses, applicants should possess a good common school education. No formal entrance examination is required for admission to courses of one term or less, but the professor in charge will satisfy himself of the fitness of candidates to pursue the course with success. The requirements for admission to one and two years' courses are given on page 18.

These courses are intended to give the greatest amount of valuable and directly useful knowlege that can be acquired in the time allotted. The studies pursued must usually be selected from those announced in the catalogue, but in order to adapt them to the varying conditions and preparation, and to the time that can be given, the courses will be arranged, so far as practicable, to meet the needs of each student.

The annual expenses for courses of one year or more, are the same as those of students in the four years' courses. No charge is made for rooms. Short course students who are in attendance for one term or less are not charged tuition.

These courses, including the work in Agriculture, Horticulture, Animal Industry, and Veterinary Science, are in the general charge of the Professor of Agriculture, to whom inquiries should be addressed.

The outline of the subjects which may be profitably pursued, and which a student may expect to complete within the time alotted, are listed below:

SUBJECTS WHICH MAY BE TAKEN IN ONE TERM OR LESS.

General Agriculture. Plant and Animal Nutrition; Fertilizers and Manures; Breeds, Breeding and Feeding; Farm Machinery; Farm Drainage; Veterinary Science; Bacteriology; Injurious Insects and Fungi; Crops and Crop Production; Farm Gardening; Carpentry; Blacksmithing; Farm Accounts; Business Law.

Horticulture. Injurious Insects; Injurious Fungi; Bacteriology; Propagation of Plants; Vegetable Gardening; Spraying and Spraying Machines; Fruit Culture; Economic Botany;

Ornamental Gardening; Greenhouse Construction and Management.

SHORT WINTER COURSE IN DAIRYING.

The Course in Dairying is intended to meet the needs of those who wish to fit themselves for managers of creameries and cheese factories. If the course is pursued during two terms and two seasons' satisfactory work is performed in a butter or cheese factory, the student will be granted a certificate of proficiency.

This course begins on the first Tuesday of January and continues six weeks.

An outline of the subjects taken up in this course follows:

First Winter. Plant and Animal Nutrition; Diseases of Dairy Animals; Milk, Butter and Cheese; Cows,—Breeding, Handling and Judging; Building and Furnishings; Barns, Creameries, etc.; Accounts.

Second Winter. Milk, Butter and Cheese; Bacteriology of the Dairy; Veterinary Science; Boiler and Engine; Business Law; Carpentry; Feeding of Cows.

SUBJECTS WHICH MAY BE TAKEN IN A ONE YEAR COURSE IN AGRICULTURE.

General Chemistry; Agricultural Chemistry; Cryptogamic Botany; Laboratory Botany; Plant Variation; Landscape Gardening; Laboratory Horticulture; Pomology; Vegetable Gardening; Invertebrate Zoology; Laboratory Zoology; Entomology; Stock Feeding; Poultry Industry; Dairy Practice; Veterinary Science; Agricultural Physics; Agricultural Engineering; Business Law; Carpentry; Forge Work.

SUBJECTS WHICH MAY BE TAKEN IN A TWO YEARS' COURSE IN AGRICULTURE.

First Year. Rhetoric; Elementary Physics; General Chemistry; Agricultural Mechanics; Cryptogamic Botany; Laboratory Botany; Invertebrate Zoology; Laboratory Zoology; Drawing; Business Law; Entomology; Laboratory Horticulture; Pomo-

logy; Vegetable Gardening; General Botany; Carpentry; Forge Work.

Second Year. Laboratory Chemistry; Biological Chemistry; Agricultural Chemistry; Vertebrate Zoology; Physiology; Dissection; Veterinary Science; Stock Feeding; Plant Variation; Landscape Gardening; Laboratory Horticulture; Geology; Agricultural Physics; Agricultural Engineering; Dairying; Stock Feeding; Poultry Industry; Dairy Practice; Bacteriology.

The Agricultural Experiment Station.

The Maine Agricultural Experiment Station owes its existence to an act of Congress, approved March 2, 1887, popularly known as the Hatch Act. The act of the Legislature accepting the Congressional grant, made the Station a department of the University of Maine.

The affairs of the Station are considered by an advisory council consisting of a committee of the trustees of the University, the president of the University, members of the station staff, and representatives from the State Board of Agriculture, the State Pomological Society, and the State Grange. The recommendations of the council are referred to the trustees for ratification. The Station receives $15,000 annually from the general government.

The inspection of fertilizers, the inspection of concentrated commercial feeding stuffs, and the testing of the graduated glassware used in creameries, are entrusted to the Station through its director, who is responsible for the execution of the public laws relating to these matters.

The publications of the Station consist of annual reports and frequent short bulletins. The latter are intended to convey to the farmer the results that relate to farm practice. The annual reports contain a fuller statement of the proceedings of the Station, involving the technical language of science. These reports include nothing of value to practical agriculture not set forth in the bulletins. All station bulletins are sent to farmers on request, free of expense. The edition of the annual report is limited and this document is sent only when expressly requested. It is reprinted in the report of the State Board of Agriculture.

COLLEGE OF ENGINEERING.

The College of Engineering provides instruction along the lines indicated by the divisions made below. Two years of general studies, including the natural sciences, modern languages, philosophy and economics, are followed by two of technical training. Opportunity is offered for special work in addition to that of the required courses which are planned to furnish not only technical instruction, but also the basis of a liberal education. The college comprises:

1. The Civil Engineering Course.
2. The Mechanical Engineering Course.
3. The Electrical Engineering Course.

The Civil Engineering Course.

The object of this course is to give the student a knowledge of mathematics, mechanics, and drawing, experience in the care and use of engineering instruments, and a drill in the application of mathematical principles and rules, with a view to fitting him at graduation to apply himself at once to engineering work.

The methods of instruction are recitations, lectures, original problems, work in the testing laboratories, field practice, and designing, including the making of original designs and the preparation of the necessary drawings. Effort is made to acquaint the student with the best engineering structures, and with standard engineering literature.

The engineering building contains recitation rooms, designing rooms, testing laboratories, drawing rooms, and instrument rooms, and is well equipped.

Upon graduation the student receives the degree of Bachelor of Civil Engineering; three years later, on proof of satisfactory advancement and on presentation of a thesis embodying original work or investigation, he receives the degree of Civil Engineer.

STUDIES OF THE CIVIL ENGINEERING COURSE.

For the Freshman Year see page 70; for Declamations and Themes see page 33; for Military science see page 67.

Sophomore Year.

Fall Term—18 weeks.	Hours.	Spring Term—18 weeks.	Hours.
M13, French, p. 35, or M17, German, p. 36,	2.5	M14, French, p. 35, or M18, German, p. 36,	2.5
Ms6, Analytical Geometry, p. 44,	5.0	Ms7, Calculus, p. 44	5.0
Ps1, General Physics, p. 46	5.0	Ps2, General Physics, p. 46	2.5
Dr4, Mechanical Drawing, p. 48,	†7.0	Ps5, Laboratory Physics, p. 46	†5.0
Dr6, Descriptive Geometry, p. 48,	2.5	Dr7, Descriptive Geometry, p. 48,	1.5
		Ce1, Plane Surveying, p. 60	2.5
		Ce2, Field Work in Surveying, p. 60	†4.0

Junior Year.

Ps11, Psychology p. 38	2.5	Cv2, English History, p. 39	2.5
Ms8, Calculus, p. 44	2.5	Pl2, Logic, p. 39	2.5
Ms12, Adv. Int. Calculus, p. 45, or, Ms20, Solid Analytic Geometry, p. 45, or Nh11, Geology, p. 53, or	2.5	Ms13, Adv. Integral Calculus, p. 45, or Ms15, Differential Equations, p. 45, or Ms9, Descriptive Astronomy, p. 44, or	2.5
Ps8, Mathematical Physics, p. 47, or Ps9, Laboratory Physics, p. 47,	†5	Ps7, Advanced Optics, p. 47, or Ps10, Adv. Lab. Physics, p. 47,	†5
Ce3, Railroad Engineering, p. 60,	2.5	Dr5, General Drawing, p. 48, 5 w.	
Ce4, Railroad Work, p. 60	†5 0	Dr8, Stereotomy, p. 48, 5 w.	†10.0
Ce5, Highway Engineering, p. 60,	1.0	Ce9, Higher Surveying, p. 61, 8 w,	
Ce6, Mechanics, p. 60	5.0	Ch13, Mineralogy, p. 50	†2.0
		Ce7, Mechanics, p. 61	5.0

Senior Year.

Cv9, Constitutional Law and History, p. 40	5.0	Cv8, Political Economy, p. 39	5.0
Ce8, Sanitary Engineering, p. 61 or Mathematics or Physics as in Junior Year	2.5	Ms10, Practical Astronomy, p. 45,	2.5
Ce10, Hydraulics, p. 61	2.5	Ce13, Structures, p. 62	5.0
Ce12, Structures, p. 61	5.0	Ce15, Designing and Thesis Work, p. 62, or Mathematics or Physics as in Junior Year, elective with †5 hours of Ce15.	†12.0
Ce11, Hydraulics Field Work, p. 61, 9 w. Ce14, Designing, p. 62, 9 w.	†7.0		

The Mechanical Engineering Course.

This course is designed to give such a training in mathematics, mechanics, the principles of mechanism, drawing, and manual arts, as shall make the student competent to deal successfully with the problems of mechanical engineering. The technical courses include the geometry of machinery; gearing, with problems and practice; transmission of motion and power by belts, cams, couplings and links; the study and designing of the valve

and link motions used in the steam engine; analytic mechanics; the strength of materials; expansion of steam; construction of steam engines; the designing of steam boilers, and hydro-mechanics.

The methods of instruction include lectures, recitations, practice in the various branches of shop-work, the solution of numerous problems, the testing of theoretical results by comparison with modern machinery, the inspection of important plants, and the use of journals and catalogues.

The department shares Wingate Hall with the departments of civil engineering and physics. The machine shop is equipped with iron working and wood working machinery of the most approved forms.

Upon graduation the student receives the degree of Bachelor of Mechanical Engineering; three years later, on proof of satisfactory advancement and on presentation of a thesis embodying original work or investigation, he receives the degree of Mechanical Engineer.

STUDIES OF THE MECHANICAL ENGINEERING COURSE.

For the Freshman Year see page 70; for Declamations and Themes see page 33; for Military Science see page 67.

SOPHOMORE YEAR.

FALL TERM—18 WEEKS.	Hours.	SPRING TERM—18 WEEKS.	Hours.
M13, French, p. 35, or M17, German, p. 36	2.5	M14, French, p. 35, or M18, German, p. 36	2.5
Ms6, Analytical Geometry, p. 44,	5.0	Ms7, Calculus, p. 44	5.0
Ps1, General Physics, p. 46	5.0	Ps2, General Physics, p. 46	5
Dr6, Descriptive Geometry, p.48,	2.5	Ps5, Laboratory Physics, p. 46	†5.0
Me1, Carpentry, p. 62	†7.0	Dr7, Descriptive Geometry, p.48,	1.5
		Me2, Forge Work, p. 63	†5.0
		Me3, Kinematics, p. 63	†5.0

JUNIOR YEAR.

P11, Psychology, p. 38	2.5	Cv2, English History, p. 39	2.5
Ms8, Calculus, p. 44	2.5	P12, Logic, p. 39	2.5
Nh11, Geology, p. 53, or Ms12, Advanced Integral Calculus, p. 45, or Ms20, Solid Analytical Geometry, p. 45, or Ps8, Mathematical Physics, p. 47, or Ps9, Laboratory Physics, p.47. †5	2.5	Me6, Analytical Mechanics, p. 63, 8 w. Me7, Applied Mechanics, p. 63, 10 w.	5.0
Me5, Analytical Mechanics, p.63,	5.0	Me9, Machine Design, p. 64	3.5
Me4, Machine Work, p. 63, or Ps11, Electrical Measurements and Testing, p. 47, elective with †4 hrs of Me4	†8.0	Me4, Machine Work, p. 63, or Ms13, Advanced Integral Calculus, p. 45, 2.5 hrs. or Ms15, Differential Equations, p. 45, 2.5 hrs. or Ps7, Advanced Optics, p. 47, 2.5 hrs., or Ps10, Adv. Lab. Physics, p.47, †5 hrs., elective with †5 hrs. of Me4	†10.0
Ee1, Electricity and Magnetism, p. 65	2.0		

SENIOR YEAR.

Cv9,	Constitutional Law and History, p. 40.....	5.0	Cv8,	Political Economy, p. 39..	5.0
Me8,	Applied Mechanics, p. 64..	2.5	Me13,	Testing, p. 64.....	2.5
Me10,	Hydro-Mechanics, p.64....	2.5	Me14,	Steam Engine, p. 64.	3.5
Me11,	Heat and Steam, p. 64.....	2.5	Me15,	Steam Engine Design, p. 65, 9 w. and	
Me12,	Steam Boiler Design, p. 64, or Mathematics or Physics, as in Junior year, elective with †5 hrs. of Me12	†12.0	Me16,	Thesis Work, p.65, 9 w. or Mathematics or Physics as in Junior year, elective with †5 hrs. of Me15 and Me16.	†15.0

The Electrical Engineering Course.

This course is designed to give the student the training necessary to prepare him to meet successfully the problems of the practical electrical engineer. It is identical with the course in Mechanical Engineering for the first two years. During the last two years the student devotes his time about equally to mechanical and electrical work. He gets a knowledge of steam engineering, boiler management, mechanics and kindred subjects, and at the same time becomes familiar with the various branches of electrical engineering. The work consists of lectures, recitations, designing and drafting, laboratory practice, and plant testing. This course is in the charge of the professor of physics.

The lecture-room, drafting-room, and junior laboratory are located in Wingate Hall. The electric lighting plant and dynamo laboratory occupy a building adjoining the Shop. The equipment is ample to give the student a thorough preparation for the work of designing, constructing, testing and operating the various machines and instruments found in an electric plant.

Upon graduation the student receives the degree of Bachelor of Mechanical Engineering; three years later, on proof of satisfactory advancement and on presentation of a thesis embodying original work or investigation, he receives the degree of Mechanical Engineer or Electrical Engineer, as his professional work may make proper.

STUDIES OF THE ELECTRICAL ENGINEERING COURSE.

For the Freshman Year see page 70; for Declamations and Themes see page 33; for Military Science see page 67.

SOPHOMORE YEAR.

FALL TERM—18 WEEKS.	Hours.	SPRING TERM—18 WEEKS.	Hours.
Ml3, French, p. 35, or Ml7, German, p. 36	2.5	Ml4, French, p. 35 or Ml8, German, p. 36	2.5
Ms6, Analytical Geometry, p. 44	5.0	Ms7, Calculus, p. 44	5.0
Ps1, General Physics, p. 46	5.0	Ps2, General Physics, p. 46	2.5
Dr6, Descriptive Geometry, p. 48	2.5	Ps5, Laboratory Physics, p. 46	†5.0
Me1, Carpentry, p. 62	†7.0	Dr7, Descriptive Geometry, p. 48,	1.5
		Me2, Forge Work, p. 63	†5.0
		Me3, Kinematics, p. 63	†4.0

JUNIOR YEAR.

Pl1, Psychology, p. 38	2.5	Cv2, English History, p. 39	2.5
Ms8, Calculus, p. 44	2.5	Pl2, Logic, p. 39	2.5
Nh11, Geology, p. 53, or Ms12, Advanced Integral Calculus, p. 45, or Ms20, Solid Analytic Geometry p. 45 or Ps8, Mathematical Physics, p. 47 or Ps9, Laboratory Physics, p. 47 †5	2.5	Me6, Analytical Mechanics, p. 64, 8 w. Me7, Applied Mechanics, p. 63 10 w.	5 0
Ps11, Electrical Measurements and Testing, p. 47	†4.0	Me9, Machine Design, p. 64 or Ms13, Advanced Integral Calculus, p. 45, 2.5, or Ms15, Differential Equations, p. 45, 2.5, or Ps7, Adv. Optics, p. 47, 2.5, or Ps10, Adv. Lab. Physics, p. 47, †5	3.5
Me5, Analytical Mechanics, 63	5.0		
Ee1, Electricity and Magnetism, p. 65	2.0	Ee2, Electricity and Magnetism, p. 65	3.0
Me4, Machine Work, p. 63	†4.0	Me4, Machine Work, p. 63	†5.0

SENIOR YEAR.

Cv9, Constitutional Law and History, p. 40	5.0	Cv8, Political Economy, p. 39	5.0
Me11, Heat and Steam, p. 64	2.5	Me14, Steam Engine, p. 64 or Mathematics or Physics as in Junior Year,	3 5
Ee3, Electrical Machinery, p. 65.	2.5		
Ee5, Electrical Design, p. 66	†7.0	Ee4, Electrical Engineering, p. 66, 9 w. 1st	5.0
Ee7, Laboratory Electricity, p. 66,	†5.0	Ee6, Electrical Design, p. 66, 9 w 1st	†10.0
Ee9, Power Stations, p. 66, or Ee12, Telephony, p. 67, or Me8, Applied Mechanics, p. 64, or Mathematics or Physics as in Junior Year	2.5	Ee8, Theoretical Electricity, p. 66, 9 w. 2nd	2.5
		Ee11, Thesis Work, p. 67, 9 w. 2nd	†15.0

COLLEGE OF PHARMACY.

The College of Pharmacy comprises:

1. The Pharmacy Course. (Four years.)
2. The Short Course in Pharmacy. (Two years.)

The Pharmacy Course.

This course is offered in response to a demand for a thorough training, both general and technical, for those who are to become pharmacists. It aims to combine a broad general culture and thorough preparation along its special lines, with the design of affording both the intellectual development necessary for the well rounded professional or business man, and the necessary technical training. To this end, it includes the same instruction in modern languages, civics, and the sciences, offered in other college courses.

Those who intend to fit themselves for pharmaceutical work are urged to consider carefully the superior advantages of this course. The growing importance of biological, sanitary, and medical sciences, and the pharmacist's relation to them, make it increasingly necessary to his success, that he be not only a well trained man in the technical branches, but an educated man in the broadest sense.

Instruction in pharmaceutical studies is given by means of lectures, recitations, and tests, supplemented by work in the laboratories of chemistry and pharmacy, and embraces qualitative, quantitative, and volumetric analysis, toxicology, bacteriology, prescriptions, the preparation of pharmaceutical compounds, and original investigations.

The library contains valuable reference literature in chemistry and pharmacy, and the best chemical and pharmaceutical journals.

Upon graduation the student receives the degree of Bachelor of Science; after one year, on proof of professional work or further study, he receives the degree of Graduate in Pharmacy; two years later, on proof of satisfactory advancement and on presentation of a thesis embodying original work or investigation, he receives the degree of Master of Science.

STUDIES OF THE PHARMACY COURSE.

For the Freshman Year see page 70; for Declamations and Themes see page 33; for Military Science see page 67.

Sophomore Year.

Fall Term—18 weeks.	Hours.	Spring Term—18 weeks.	Hours.
M11, French, p. 35 or M15, German, p. 35	5.0	M12, French, p. 35 or M16, German, p. 35	5.0
Ps1, General Physics, p. 46 or Ps12, General Physics, p. 46	2.5	Ps2, General Physics, p. 46 or Ps13, General Physics, p. 46	2.5
Ch5, Chemical Theory, p. 49	2.5	Ps5, Laboratory Physics, p. 46	†5.0
Ch14, Qualitative Analysis, p. 50	†10.0	Ch6, Inorganic Chemistry, p. 49.	2.5
Nh1, Cryptogamic Botany, p. 51.	2.5	Ch15, Qualitative Analysis, p. 50.	†10.0
Nh2, Laboratory Botany, p. 52	†2.0		

Junior Year.

P11, Psychology, p. 38	2.5	P12, Logic, p. 39	2.5
M17, German, p. 36	2.5	Ch8, Organic Chemistry, p. 49	2.5
Ch7, Inorganic Chemistry, p. 49.	2.5	Ag2, Biological Chemistry, p. 54.	5.0
Ch10, Chemical Readings, p. 49.	1.0	Ch21, Toxicology and Biological Analysis, p. 51	†5.0
Ch17, Quantitative Analysis, p. 50	†10.0	Ht8, Histology of Plants, p. 57 9 w.	†5.0
Ag1, Biological Chemistry, p. 54.	2.5	Ag13. Bacteriolgy, p. 56, 9 w.	
Pm5, Inorganic Pharmacognosy, p. 59	2.5	Pm6, Organic Pharmacognosy, p. 59	4.0

Senior Year.

Cv9, Constitutional Law and History, p. 40	5.0	Cv8, Political Economy, p. 39	5.0
Pm2, Pharmacy, p. 59	5.0	Nh3, Advanced Physiology, p. 52,	2.5
Pm3, Laboratory Pharmacy, p. 59	†10.0	Pm4, Pharmacopœia and Prescriptions, p. 59	3.0
Pm7, Materia Medica, p. 59	2.5	Pm8, Thesis Work, p. 59	†10.0
		Ag15, Laboratory Bacteriology, p. 56	†5.0

The Short Course in Pharmacy.

This course is designed for those who, for lack of time or for other reasons, are unable to take the four years' course in pharmacy. The more general educational studies of the full course

are omitted, but it is the aim to offer as broad a range of subjects as can be undertaken without sacrifice of thoroughness in the technical work. The course corresponds, in general, to the usual full course of the pharmaceutical college. The work required of the student will occupy his whole time during the college year of nine months, and will usually exclude work in drug stores, during term time.

Students who complete this course in a satisfactory manner receive a certificate. Three years later, on presentation of a satisfactory thesis and proof of professional work, or further study, they receive the degree of Graduate in Pharmacy.

STUDIES OF THE SHORT COURSE IN PHARMACY.

For Declamations and Themes see page 33; for Military Science see page 67.

First Year.

Fall Term—18 Weeks.	Hours.	Spring Term—18 Weeks.	Hours.
Ps3, Elementary Physics, p. 46..	2.5	Ps4, Elementary Physics, p. 46..	2.0
Ch1, General Chemistry, p. 48 ...	2.5	Ps6, Laboratory Physics, p. 46...	†1.0
Ch14, Qualitative Analysis, p. 50,	†12.0	Ch2, General Chemistry, p. 48...	2.5
Pm1, Pharmacy, p. 58.	5.0	Ch16, Quantitative Analysis, p. 50, 9 w.	†14.0
Pm5, Inorganic Pharmacognosy, p. 59	2.5	Ch19, Volumetric Analysis and Assaying, p. 51, 9 w....	
		Ht1, General Botany, p. 56.....	†5.0
		Pm6, Organic Pharmacog., p. 59,	4.0

Second Year.

Ch9, Organic Chemistry, p. 49...	2.5	Ch21, Toxicology and Biological Analysis, p. 51, 9 w.	†13.0
Nh2, Laboratory Botany, p. 52..	†2.0	Ag13, Bacteriology, p. 56, 9 w. (5 hrs.)	
Ag1, Biological Chemistry, p. 54,	2.5	Ag2, Biological Chemistry, p. 54,	5.0
Pm2, Pharmacy, p. 58	5.0	Pm4, Pharmacopœia and Prescriptions, p. 59.....	3.0
Pm3, Laboratory Pharmacy, p. 59.....	†10.0	Pm8, Thesis Work, p. 59.....	†10.0
Pm7, Materia Medica, p. 59	2.5		

SCHOOL OF LAW.

Advisory Board.

Hon. Henry Bradstreet Cleaves,.....Portland.
Hon. William Henry Fogler,.....Rockland.
Hon. Charles Hamlin, M. A.,.....Bangor.
Hon. Herbert Milton Heath, M. A.,.....Augusta.
Hon. Andrew Peters Wiswell, B. A.,.....Ellsworth.

Faculty.

Abram Winegardner Harris, Sc. D., President of the University.

George Enos Gardner, M. A., Dean, and Professor of Law.

Allen Ellington Rogers, M. A., Professor of Constitutional Law.

Charles Hamlin, M. A., Lecturer on Bankruptcy.

Lucilius Alonzo Emery, M. A., LL. D., Lecturer on Roman Law.

Andrew Peters Wiswell, B. A., Lecturer on Evidence.

Louis Carver Southard, M. S., Lecturer on Medico-Legal Relations.

Forest John Martin, LL. B., Lecturer on Pleading and Maine Practice.

Hugo Clark, C. E., Lecturer on Equity Pleading.

Ralph Kneeland Jones, B. S., Librarian.

Robert Harper Murray, B. A., LL. M., Instructor in Law.

The School of Law, a department of the University of Maine, was opened to students in the fall of 1898. It occupies a suite of rooms in the Exchange Building, corner of State and

Exchange streets, Bangor. In Bangor are held annually one term of the U. S. District Court, five terms of the Maine Supreme Judicial Court, one term of the Law Court, and daily sessions of the Municipal Court. The library of the school contains about fifteen hundred volumes, including full sets of the United States, Maine, Massachusetts, and Vermont Reports; of the American Digest, American Reports and American State Reports, and a carefully selected list of text-books.

Students have access to the Penobscot Bar Association Library of about 4,000 volumes. The Bangor Public Library contains about 43,000 volumes.

Admission.

Graduates of colleges, or satisfactory preparatory schools, will be admitted to the junior class as candidates for the degree of Bachelor of Laws without examination. Other applicants must give satisfactory evidence of the necessary educational qualifications for the pursuit of the required course of study. These will be fixed in each case, on a consideration of its merits.

Special students, not candidates for a degree, will be admitted without examination, and may pursue any studies for which they are prepared.

Students who produce from another law school of good standing a certificate showing that they have completed satisfactorily the equivalent of one year's work in this school, will be admitted to the senior class without examination. Other candidates for advanced standing will be required to pass an examination satisfactory to the faculty of the school on the studies of the first year, or equivalent studies.

Members of the bar of any state will be admitted to the senior class, without examination, as candidates for the degree of Bachelor of Laws.

Method of Instruction.

Three methods of instruction are used by law schools. These are the lecture system, the text-book system, and the case system.

The officers of the school are convinced that the case system is the most vital, effective, and satisfactory method of law study, and, while text-books will be used to some extent, and certain parts of the law will be covered by lectures, the careful and systematic study of cases will form the basis of the work.

Persistent use will be made of problems or hypothetical cases. In each study the student will be given problems containing a brief but adequate statement of facts, and the questions of law arising therefrom, and will be required to prepare written opinions upon them. These opinions will afterward be read in class, and the law discussed. The student will then be referred to the actual cases from which the problems are taken, will be required to read them carefully, and to compare his own treatment with that of the court. The solution of the problems will involve only the principles that have already been studied. Such problems are very effective in fixing in the memory the principles of law, and in cultivating readiness and skill in their application.

Careful attention will be given to practice, statute law, conveyancing, the drawing of contracts, wills, and other legal documents.

Moot Court.

Emphasis will be placed upon the moot court. It will hold weekly sessions, beginning early in the course. Questions of law and fact will be heard, and particular attention will be given to the trial of jury cases. The practice of all the courts of the State will be here exemplified. Work in the court will be required of every student.

Course of Study.

The course of study covers two years, in accordance with the requirements for admission to the bar in the State of Maine.* The school year consists of thirty-two weeks, and is divided into the fall, winter, and spring terms of eleven, ten, and eleven weeks respectively.

For the detailed statement of courses see pages 40-43.

Degrees.

The degree of Bachelor of Laws will be conferred on the completion of the course. The degree of Master of Laws will be granted for one year of graduate study.

---

*The Legislature of 1899 increased the time of preparation required for admission to the bar to three years. The course of study in the School of Law will be arranged in accordance with this requirement, beginning with the fall term of 1899.

Expenses.

The tuition fee is $60 a year, payable in three installments of $20, at the beginning of the fall, winter, and spring terms. The tuition fee must invariably be paid before the student is admitted to any lectures. The graduation fee is $10. There are no other charges.

Board and furnished room, with light and heat, may be obtained for one person, in the most convenient and central locations near the School, at a price ranging from $4.00 to $7.00 per week. In other locations, lower rates may be obtained, and expenses will be further reduced if two students occupy one room.

THE LIBRARY AND READING ROOM.

The library, on the first floor of Coburn Hall, contains over thirteen thousand bound volumes, and about five thousand pamphlets. The growth of the library is about fifteen hundred volumes a year.

A large and convenient reading room adjoins the book room. About one hundred and eighty of the most important literary, scientific, and technical papers, magazines, and reviews, both American and foreign, are kept on file.

The library is open for eight hours daily, except Sunday. Students are allowed direct access to the shelves. Students may have two books each at a time, to be kept two weeks, when they may be renewed, unless some one else has filed an application for them. There is a fine of two cents a day for books kept over time. If additional books are needed for special work they may be obtained upon application to the librarian.

A reading room, located on the first floor of Oak Hall, is provided with the principal daily and weekly newspapers.

THE MUSEUM AND HERBARIUM.

The museum is located in two stories of the wing of Coburn Hall. In the upper story are exhibited the mineral collection, geological specimens and plant models. The mineral cabinet embraces a general collection of three hundred species of the more common minerals, arranged for study according to Dana's system. There is a fine collection of economic minerals, presented by the National Museum; and an educational series of rocks, given by the U. S. Geological Survey. The geological cabinet. embraces a collection of plant and animal fossils, and a collection of the more important fragmental, crystalline, and volcanic rocks.

On the lower floor are the collections of vertebrate and invertebrate animals, and a set of animal models. The invertebrates include working collections and interesting native and exotic exhibition specimens of sponges, hydroids, corals, echinoderms, vermes, mollusks, crustaceans, and insects. The vertebrates include the nucleus of a collection of the fishes, reptiles, birds, and mammals of the State, and a set of type exotic mammals. The collection of animal models embraces a human manikin, the human eye, ear, and larynx, an insect, leach, snail, fish, snake, and bird.

The herbarium consists of the original collection of Maine plants of about 500 species; the new collection of Maine plants of 800 species; the Blake herbarium of 7,000 species, including phænogams and cryptogams; Ellis and Everhard's North American Fungi, comprising thirty-five centuries; Halsted's Lichens of New England; Underwood's Hepaticæ; Cummings and Seymour's North American Lichens; Cook's Illustrative Fungi; Collins's Algæ of the Maine Coast; a collection of illustrative cryptogams in boxes; Harvey's Weeds and Forage Plants of Maine of 300 species; Halsted's Weeds; a collection of grasses and forage plants of 400 species; a collection of United States woods prepared by the United States Department of Agriculture; a collection of seeds and fruits; numerous slides for the microscope.

THE BOTANICAL LABORATORY.

FIELD DAY.

One day in each year, usually the fourth Wednesday in May, is known as the Field Day of the agricultural departments. The usual exercises are omitted and all departments are thrown open to visitors. Special effort is made to exhibit the facilities of the agricultural departments in the most thorough manner. Special rates are obtained on the railroad for those who come from a distance. The attendance has ranged from twelve hundred to seventeen hundred persons. The program includes informal addresses by members of the faculty in regard to the collections; demonstrations with some of the more important apparatus; exhibitions of improved agricultural machinery; the operation of the dairy building; an exhibit of agricultural products, tools and supplies contributed by manufacturers and dealers. The experimental work of the Experiment Station is explained by the investigators. The students give an exhibition drill.

Circulars in regard to Field Day may be obtained by addressing the Professor of Agriculture.

GENERAL REGULATIONS.

The regulations in regard to the selection of studies, standings and grades, absences from recitations and examinations, rhetorical exercises, entrance conditions, leaves of absence, attendance upon church and chapel, penalties, examinations, and athletics, are printed in full in the annual report of the President for the year ending December 31, 1894.

By these regulations, the quota of regular studies for each student is, for a minimum, seventeen hours, and, for a maximum, twenty hours of class room work each week. In the application of this rule, two hours of laboratory work or of other exercises not requiring preparation, count as one hour.

Excuses for absence from individual exercises are not required. Each student is expected to be present at all recitations and other exercises, except when imperative reasons require absence. Of these reasons he is the judge, but a student who is absent from ten per cent. or more of the exercises in any study, is not admitted to the final examination. A student who fails to pass at an examination, is absent from an examination, or is excluded from an examination, may make up his deficiency at the special examinations held at the times noted in the calendar. The arrearage examinations during the Christmas recess include only studies of the spring term; the examinations during the Easter recess include only studies of the fall term. A student who fails to make up an arrearage, before the study is again taken in class, is required to attend recitations in that study.

Every student is given a report of his work shortly after the close of each term. Parents or guardians may obtain these reports from the secretary upon application.

SCHOLARSHIP HONORS.

Honors for scholarship are of two kinds, general and special. General honors are given at graduation to students who attain an average standing, after the freshman year, of ninety on a scale of one hundred. Special honors are granted for the satisfactory completion of an honor course in addition to the work required for a degree. An honor course must involve at least ninety recitations or an equivalent. The methods of work are determined by the instructor. The list of honor courses, with full description, is published by the secretary of the faculty four weeks before commencement. Honor courses are open to

juniors and seniors who have attained an average standing of eighty per cent. in all previous work, and an average standing of ninety per cent. in the previous work of the department in which the honors are sought. A student cannot register for an honor course without the consent of the faculty, nor later than the fourth week of the fall term. Upon completion of a course the student's work will be tested by an examination or thesis, under the direction of the faculty committee on honor courses, and the result, together with the instructor's report, will be laid before the faculty. The faculty may grant special honors to those students who receive the approval of the committee, but will not do so if the general work is unsatisfactory. Honors, and their nature, are stated upon the commencement program and published in the annual catalogue.

STUDENT EXPENSES.

Many students go through college for an annual expenditure of a little more than $200, exclusive of the expense of clothing, traveling and vacations, and very many earn a part of this sum, by vacation work. An estimate of the necessary annual expenses of a student in any department, except the School of Law, may be made from the following table. For the expenses of students in the School of Law, reference is made to the article on that school. It should be noticed that clothing, traveling, vacation, society and personal expenses are not included in the table. These vary according to individual tastes and habits. The table is made up for men students who room in the dormitory, and board at the Commons. The necessary expenses of other students are sometimes lower, but usually slightly higher. In all cases an allowance must be made for personal incidental expenses. The expenses of the first year are higher than those of later years.

Annual Student Expense.

Tuition, 2 terms at $15.00,	$30 00
Registration fee, 2 terms at $5.00,	10 00
Incidentals, 2 terms at $10.00,	20 00
Laboratory fees, average, about,	8 00
Text-books, about,	15 00
Board, 34 weeks at $3.00,	102 00
Heat and light for half room, and general care of dormitory, about,	15 00
Total,	$200 00

The tuition charge is $15.00 a term, or $30.00 a year, and all students are subject to this charge, except those in short courses in agriculture, for which no tuition charge is made. Worthy students, residents of Maine, who need assistance, may obtain from the University loans sufficient to cover the tuition charge. The regulations in regard to these loans are fully stated in the article on loans, page 102.

The registration fee of $5.00 must be paid at the beginning of each term, before the student enters any classes.

The incidental fee is $10.00 a term or $20.00 a year, and covers heat and light for public buildings, reading-room charges, care and cleaning of public rooms, and miscellaneous expenses.

The cost of text-books will average almost exactly $15.00 a year for the course. These may be bought from the librarian at cost, but must be paid for on delivery. The expense can be decreased by buying second-hand books and selling them when used.

Students in the laboratories and shops pay a charge, to cover cost of materials and maintenance. These charges are as follows:—biology, per term, $1.00; chemistry, per term, about $3.00; bacteriology, per course, $3.00; physics, per course, $2.00; pharmacy, per term, about $3.50; mineralogy, $2.00; natural history, per course, $2.00; electrical engineering, per course, $2.50; shop, per course, $5.00. Laboratory charges in the civil engineering course are very few, but travelling expenses in visiting engineering works will be nearly equivalent to the laboratory expenses of other courses.

In some years the students spend a week in camp, for military instruction. The expense is borne partly by the university and partly by the student. The expense is about $5.00 a student.

The largest item of expense is for board. At the Commons, the university boarding house, each student pays his share of the cost, usually about $2.75 to $3.00 a week. Board may be obtained in clubs or private families at prices ranging from $3.00 to $3.25 a week.

Rooms in the men's dormitory are free, but students supply their own furniture, and pay for heat and light, for the lighting and care of the halls and public rooms of the dormitory, and for damages. This charge may be expected to be about $15.00 a year, for each student, when two occupy a room. Furnished rooms, with light and heat, may be obtained in the village for $1.50 a week if occupied by one person, or $2.00 a week if occupied by two persons.

The estimate for furniture is made on the assumption that two students will unite in furnishing a room, and that something will be realized from the sale of furniture upon graduation.

Women students who do not live at their own homes are required to room and board at the Mt. Vernon House. The charge for board is $3.00 a week. No charge is made for the rent of rooms, but students provide their own furniture, take care of their rooms, pay for the heat and light of their rooms, and for the heat, light and care of the halls and public rooms. The charge for all these items is at cost. Students are charged for all damages done to university property or to that of other students.

Each student is required to deposit with the Treasurer, a bond, with two good names as sureties, in the amount of $150.00, to cover term bills. Blanks on which bonds should be made out will be furnished by the Secretary on application. Those who keep a sufficient deposit with the Treasurer to cover the bills of one term, will not be required to furnish a bond. The deposit required is $90.00 from those who board at the Commons or Mt. Vernon House, and $30.00 from others. No student who is in debt to the treasury will be graduated.

A circular containing a fuller statement in regard to expenses, and treating of the opportunities for self help, may be obtained on application.

LOANS.

Tuition Loans.

Worthy students, residents of Maine, who need assistance may borrow from the university treasury a sum sufficient to pay the tuition charge. This privilege is not extended to students in the School of Law.

Borrowers are required to give endorsed notes or other satisfactory security. The loans bear interest at six per cent. per annum, and are due $30.00 a year, beginning with the first year after graduation, but may be paid earlier. No member of the faculty is accepted as an endorser.

Loans are granted by a committee consisting of the President and two other members of the faculty. The number of loans may not exceed one-third of the number of students in the undergraduate departments. Loans are granted to cover the tuition charges of one year at a time.

The first grant of loans for each university year is made in June preceding. Applications for loans are considered during May, and to insure attention at this time should be forwarded to the President not later than May 15. A second award is made in the fall term. Applications should be made not later than October 10. They must be made to the President upon blanks to be obtained from the secretary of the faculty. Awards made in June may be withdrawn from students who do not register, or claim their loans by October 10.

The Kittredge Loan Fund.

This fund, amounting to nearly one thousand dollars, was established by Nehemiah Kittredge of Bangor. It is in the control of the President and Treasurer of the University, by whom it is loaned to needy students. In the deed of gift, it was

prescribed that no security should be required further than personal notes bearing interest at the prevailing rate. Loans are made on the conditions that the interest shall be paid promptly, and that the principal shall be returned from the first earnings after graduation.

THE ALUMNI.

THE GENERAL ALUMNI ASSOCIATION.

George H. Hamlin, President, Orono.
Charles P. Weston, Recording Secretary, Orono.
Ralph K. Jones, Corresponding Secretary, Orono.
Albert H. Brown, Treasurer, Old Town.
James N. Hart, Necrologist, Orono.

LOCAL ASSOCIATIONS.

THE WEST MAINE ASSOCIATION.—S. W. Bates, First National Bank Building, Portland, President; C. S. Webster, 57 Exchange St., Portland, Secretary.

THE NORTH MAINE ASSOCIATION.—Harvey B. Thayer, Presque Isle, President; N. H. Martin, Fort Fairfield, Secretary.

THE BOSTON ASSOCIATION.—L. C. Southard, 73 Tremont St., President; J. D. Lazell, 443 Tremont Building, Secretary.

THE NEW YORK ASSOCIATION.—A. E. Mitchell, 90 High St., Passaic, N. J., President; Edmund Clark, 148 E. 49 St., New York, Secretary.

THE WASHINGTON (D. C.) ASSOCIATION.—F. Lamson-Scribner, Department of Agriculture, President; George P. Merrill, National Museum, Secretary.

THE PENOBSCOT VALLEY ASSOCIATION.—J. M. Oak, Bangor, President; E. H. Kelley, Bangor, Secretary.

CLASS SECRETARIES.

E. J. Haskell, '72, *Westbrook;* J. M. Oak, '73, *Bangor;* W. H. Gerrish, '74, *Deering;* E. F. Hitchings, '75, *Waterville;* E. M. Blanding, '76, *Bangor;* S. W. Gould, '77, *Skowhegan;* John Locke, Jr., '78, *Portland;* F. E. Kidder, '79, 1362 *California St., Denver, Colo.,* J. M. Bartlett, '80, *Orono;* H. M. Plaisted, '81, *724 Commercial Building, St. Louis, Mo.;* W. R. Howard, '82, *Belfast;* L. W. Taylor, '83, *Bangor;* E. S. Abbott, '84, *Bridgton;* J. N. Hart, '85, *Orono;* R. K. Jones, '86, *Orono;* D. W. Colby, '87, *Skowhegan;* F. S. Brick, '88, *Belfast;* Nellie W. Reed, '89, *Stillwater;* E. H. Kelley, '90, *Bangor;* H. G. Menges, '91, 21 *College Ave., Medford, Mass.;* G. F. Atherton, '92, *Susquehanna, Pa.;* G. F. Rowe, '93, *Lincoln;* F. G. Gould, '94, *Orono;* F. Damon, '95, *Bangor;* P. D. Sargent, '96, *Machias;* A. J. Patten, '97, *Orono;* C. A. Pearce, '98, *Fort Fairfield.*

ORGANIZATIONS.

FRATERNITIES.—The following fraternities are represented in the University: Q. T.V., B. Θ. Π., K. Σ., Α. Τ. Ω., Φ. Κ. Σ., Δ. Ρ., Ι. Φ., Φ. Γ. (Women's).

ASSOCIATIONS.—Young Men's Christian Association, Athletic Association, Publishing Association, Electrical Society, University Press Club, University Band, Orchestra, Photographic Society, Glee Club, Debating Society, Scientific Association, French Club.

YOUNG MEN'S CHRISTIAN ASSOCIATION.—The Young Men's Christian Association, composed of students, has for its object the promotion of Christian fellowship and aggressive Christian work.

HONORARY SOCIETY.—At the end of each year the honorary society, Lambda Sigma Eta, elects to membership the five members of the Junior class having the highest standing, and during the fall term the five next highest in the same class are added.

UNIVERSITY PUBLICATIONS.

THE ANNUAL CATALOGUE OF THE UNIVERSITY OF MAINE.—This contains descriptions of the courses of study, lists of the trustees, faculty, and students, and other information relating to the University.

THE SHORT CATALOGUE OF THE UNIVERSITY OF MAINE.—This is an abbreviated form of the catalogue.

THE ANNUAL REPORT OF THE TRUSTEES, PRESIDENT, AND TREASURER, TO THE GOVERNOR AND COUNCIL OF THE STATE.—The reports of the Trustees and President include an account of the general affairs and interests of the University for the year, and the report of the Experiment Station. The report for the odd years contains the biennial catalogue of graduates.

THE UNIVERSITY BULLETINS.—These are occasional publications containing reports of the investigations or researches made by the university officers, or other information of public interest relating to the University.

THE UNIVERSITY CIRCULARS.—These are occasional pamphlets, issued for special purposes.

THE ANNUAL REPORT OF THE EXPERIMENT STATION.—This is Part II of the Annual Report of the University.

THE EXPERIMENT STATION BULLETINS.—These are popular accounts of the results of station work which relate directly to farm practice.

THE CADET.—This is a monthly magazine published during the university year by an association of the students.

THE PRISM.—This is an illustrated annual, published by the junior class.

THE MAINE BULLETIN.—This is a small publication issued quarterly by the University, to give information to the alumni.

COMMENCEMENT.

The Commencement exercises of 1898 were as follows:—

Saturday, June 18: Junior Exhibition.

Sunday, June 19: Baccalaureate Sermon, by President A. W. Harris, Sc. D.

Monday, June 20: College Convocation, including reports of departments and student enterprises, and the awarding of prizes; Class Day Exercises; Reception by Q. T. V. Fraternity.

Tuesday, June 21: Exhibition Drill; Reception by the B. Θ. Π., K. Σ. and A. T. Ω. Fraternities; President's Reception.

Wednesday, June 22: Commencement Exercises; Commencement Dinner; Meeting of the Alumni Association; Commencement Concert.

CERTIFICATES AND DEGREES.

Certificates were presented to the following persons upon completing the Short Course in Pharmacy:

Daniel Lunt Cleaves, Portland.
Fred Elmer Hall, Houlton.
Wilbur Edwin MacDougal, South Lincoln.
Curtis Boyce Mitchell, Unity.

The first degree was conferred upon the following persons:

Fred Wesley Bailey, B. S., (in Pharmacy), Belfast.
Wilson Darling Barron, B. M. E., (in Electricity), Dexter.
Louis Jefferson Brann, B. S., (in chemistry), Gardiner.
Charles Parker Crowell, B. M. E., Orono.
Edward Harmon Davis, B. M. E., Auburn.
John Washington Dearborn, B. M. E., Bradford Center.
Samuel Clark Dillingham, B. C. E., Portland.
Walter Dolley, B. S., Gorham.
Leroy Eugene Dow, B. M. E., Portland.
Rena Ethel Dunn, B. S., Orono.
Llewellyn Nathaniel Edwards, B. C. E., Oaks.
Walter Lincoln Ellis, B. M. E., Waterville.
Lottie Gertrude Farrar, B. S., (in Chemistry), Bangor.
Gracia Lillian Fernandez, B. S., North Dexter.
George Sherman Frost, B. C. E., Bridgewater, Conn.
Bernard Alston Gibbs, B. Ph., Glenburn.

Ralph Hamlin, B. C. E., Orono.
Harry Allison Higgins, B. M. E., Woodfords.
Bertrand Randall Johnson, B. S., Deering.
George Warren Lawrence, B. M. E., (in Electricity), South Gardiner.
Albion Dana Topliff Libby, B. M. E., (in Electricity), North Scarboro.
Herbert Ivory Libby, B. M. E., Biddeford.
Harry Matthew Lincoln, B. C. E., Bangor.
Ray Herbert Manson, B. M. E., (in Electricity), Gardiner.
Dana True Merrill, B. S., East Auburn.
Elmer Drew Merrill, B. S., East Auburn.
Harrison Pratt Merrill, B. M. E., (in Electricity), Wareham, Mass.
Charles Abram Pearce, B. S., Fort Fairfield.
Leon Edwin Ryther, B. S., Bondsville, Mass.
Fred William Sawtelle, B. C. E., Fryeburg.
Albert Clifford Small, B. M. E., (in Electricity), Lisbon Center.
George Albert Smith, B. M. E., Auburn.
Alden Percy Sprague, B. M. E., Vanceboro.
Alfred Andrews Starbird, B. S., (in Pharmacy), South Paris.
Ray Parker Stevens, B. M. E., (in Electricity), Brooklin.
Edwin Albert Sturgis, B. M. E., (in Electricity), Lewiston.
Roderick Desmond Tarr, B. M. E., Biddeford.
Wilfred Reuben Tolman, B. C. E., Augusta.
Charles Staples Webster, B. S., Portland.
Warner Edwin Welch, B. M. E., Orono.
Horace Loring White, B. S., (in Chemistry), Portland.
George Arthur Whittemore, B. M. E., Framingham, Mass.
Carl Gardner Wiswell, B. M. E., East Machias.

The second degree was conferred upon the following persons, upon presentation of satisfactory theses, and proof of professional and scientific work extending over a period of not less than three years:

Harold Sherburn Boardman, C. E., Bangor.
Hosea Ballou Buck, C. E., Bangor.
George Walter Chamberlain, M. S., Weymouth, Mass.
Ora Willis Knight, M. S., Bangor.
Charles Norton Taylor, C. E., Natick, Mass.

SCHOLARSHIPS AND PRIZES.

THE KIDDER SCHOLARSHIP.—The Kidder Scholarship was endowed by Frank E. Kidder, Ph. D., Denver, Colorado, a graduate of the University in the class of 1879, to be awarded to a member of the Junior class to be selected by the President and the Faculty.

THE PRENTISS PRIZE, the gift of Mrs. Henry E. Prentiss, Bangor, will be awarded to that member of the Junior class who shall present the best oration at the Junior exhibition. In the award of this prize, both the composition and the delivery of the oration will be considered.

THE PRENTISS DECLAMATION PRIZE, the gift of Mrs. Henry E. Prentiss, Bangor, for excellence in elocution, will be awarded to the best speaker in the Sophomore class.

THE LIBBEY PRIZE, the gift of the Hon. Samuel Libbey, Orono, will be awarded to the student who shall present the best essay upon an agricultural topic. The essays must be handed to the Professor of Agriculture on or before the first Monday in June.

THE WALTER BALENTINE PRIZE, the gift of Whitman H. Jordan, Sc. D., Geneva, N. Y., will be awarded to that member of the Junior class who shall excel in biological chemistry.

THE KENNEBEC COUNTY PRIZE, the gift of the Hon. William T. Haines, Waterville, will be awarded to that member of the Senior class who shall write the best essay on applied electricity.

THE FRANKLIN DANFORTH PRIZE, the gift of Edward F. Danforth, Skowhegan, a graduate of the University in the class of 1877, in memory of his father, Franklin Danforth, will be awarded to that member of the Senior class in the agricultural course who shall attain the highest standing.

The prizes were awarded last year as follows:

The Kidder Scholarship to Alden Bradford Owen, West Pembroke.

The Prentiss Prize to Pearl Clayton Swain, Skowhegan.

The Prentiss Declamation Prize to Frank McDonald, Portland.

The Libbey Prize to Elmer Drew Merrill, East Auburn.

The Walter Balentine Prize to Walter Jean Morrill, Madison.

The Algebra Prize to Thomas Buck, Orland.

APPOINTMENTS.

Speakers at Commencement, June, 1898.

Charles Staples Webster, Portland; Charles Abram Pearce, Fort Fairfield; Walter Dolley, Gorham; Rena Ethel Dunn, Orono; Elmer Drew Merrill, East Auburn; George Arthur Whittemore, Framingham, Mass.; Gracia Lillian Fernandez, North Dexter.

Speakers at the Junior Exhibition, June, 1898.

John Wilson Brown, Brimfield, Mass.; Charles Elmer Crosby, Albion; Mildred Louise Powell, Orono; Clinton Leander Small, Auburn; Pearl Clayton Swain, Skowhegan; Oliver Otis Stover, Freeport; Reginald Lovejoy Fernald, Orono; Wallace Edward Belcher, Plymouth, Mass.

Speakers at the Sophomore Prize Declamation Contest, December, 1897.

George Collins, Athol, Mass.; Frank McDonald, Portland; Dana Leo Theriault, Caribou; Walter Neal Cargill, Liberty; Fred Carlton Mitchell, West Newfield; Joseph Onon Whitcomb, Morrill; Roy Huntley Brown, Montague City, Mass.; Clinton Llewellyn Cole, Pleasantdale; Charles Omer Porter, Cumberland Mills.

Reported to the Adjutant General of the U. S. Army.

Samuel Clark Dillingham, Portland; Herbert Ivory Libby, Biddeford; Bernard Alston Gibbs, Glenburn.

Members of Lamba Sigma Eta.

Samuel Clark Dillingham, Portland; George Sherman Frost, Bridgewater, Conn.; Bernard Alston Gibbs, Glenburn; Ralph Hamlin, Orono; Harry Allison Higgins, Woodfords; Herbert Ivory Libby, Biddeford; Albion Dana Topliff Libby, North Scarboro; Elmer Drew Merrill, East Auburn; Dana True Merrill, East Auburn; George Arthur Whittemore, Framingham, Mass.

PUBLIC WORSHIP.

Religous services of a simple character are held in the chapel every day except Saturday and Sunday. All undergraduate students are required to be present. Every undergraduate student is required to attend one church service on Sunday. Voluntary religious services, under the direction of the Young Men's Christian Association, are held weekly.

LOCATION.

The University has a beautiful and healthful location in the town of Orono, Penobscot county, half way between the villages of Orono and Stillwater, three miles from the city of Oldtown, and nine miles from the city of Bangor. The Stillwater river, a branch of the Penobscot, flows in front of the build-

ings, forming the western boundary of the campus. Orono is upon the Maine Central Railroad and is easy of access from all parts of the State.

The Bangor, Orono, and Oldtown Electric Railroad, runs through the university grounds. Visitors will find it convenient to take the electric cars at Bangor, Veazie, or Oldtown, as the electric road does not run to the railroad station at Orono. Baggage may be sent to Orono by railroad.

The School of Law is located in the city of Bangor, nine miles from Orono, in the Exchange Building, on the corner of Exchange and State streets.

MILITARY INSTRUCTION.

Military instruction is required by law. The department is under the charge of an officer of the regular army, detailed by the President of the United States for this purpose. Cadet rifles, ammunition, and accoutrements are furnished by the War Department. The course has special reference to the duties of officers of the line. The students are organized into an infantry battalion of four companies, a band, and a signal corps, officered by cadets selected for their character, soldierly bearing, and military efficiency. The corps is instructed and disciplined in accordance with rules prescribed by the President of the United States.

The trustees have prescribed a uniform consisting of dark blue blouse, with State of Maine buttons, and gold braid on cuffs; trousers of light blue; blue cap with gold wreath ornament; white duck trousers for hot weather. The officer's blouse is of the pattern prescribed by U. S. army regulations, without collar ornaments. Students are required to wear their uniforms during military exercises, and are allowed to do so at other times. Students must purchase uniforms subject to the approval of the

military instructor, who is required to see that the quality and fit are satisfactory. The prices for the year ending November 30, 1898, were as follows: blouse $7.00; cloth trousers $5.00; three pairs of duck trousers $3.00; cap $1.50; three pairs of gloves 60c.; three belts 30c.; total, $17.40.

The three seniors who attain the highest standing in the military department are reported to the Adjutant General of the U. S. Army, and their names are printed in the U. S. Army Register. Cadets who have satisfactorily completed the course in military science receive at graduation a certificate of military proficiency and are reported to the Adjutant General of Maine.

During the senior year students are permitted to substitute an equivalent amount of work in some other department in place of military drill.

THE COBURN CORP OF CADETS.

Instructor Perley Walker, Commanding.

General Staff.

Captain and Chief of Staff—Charles Comfort Whittier.
First Lieutenant and Chief Signal Officer—Wallace Edward Belcher.
First Lieutenant and Quartermaster—Oliver Otis Stover.

Field and Staff.

Major—Clinton Leander Small.
First Lieutenant and Adjutant—Eben Price Bassett.

Non-Commissioned Staff.

Sergeant Major—Frank Henry Bowerman.
Quartermaster Sergeant—Clinton Llewellyn Cole.
Color Sergeant—Arthur Southwick Page.

Company A.

Captain.....Frank Lothrop Batchelder.
First Lieutenant.....Herman Henry Oswald.
Second Lieutenant.....Edwin Melcher Smith.
First Sergeant.....Charles Hutchinson Lombard.
Sergeant.....Leo Bernard Russell.
Sergeant.....William Goldsbrough Jones.
Sergeant.....Wilfred Harold Caswell.
Sergeant.....William Joseph Burgess.
Corporal.....Lewis Goodrich Varney.
Corporal.....LeRoy Harris Harvey.
Corporal.....Herbert Henry Leonard.
Corporal.....Gardner Percival Shorey.
Corporal.....Fred Hammond Hanson Bogart.

Company B.

Captain.....Arthur Clement Wescott.
First Lieutenant.....Alson Edwin Boynton.
Second Lieutenant.....Allen Whitmore Stephens.
First Sergeant.....John Gardner Lurvey.
Sergeant.....Philip Ross Goodwin.
Sergeant.....Malcolm Cole Hart.
Sergeant.....Wallace Augustus Weston.
Sergeant.....Benjamin Thomas Weston.
Corporal.....William Harris Boardman.
Corporal.....Henry Perez Hoyt.
Corporal.....Fred Lewis Martin.
Corporal.....Lewis Robinson Cary.
Corporal.....Lawrence Mabry Swasey.

Company C.

Captain.....William Augustus Murray.
First Lieutenant.....Walter Jean Morrill.
Second Lieutenant.....Bert Whitaker Flint.
First Sergeant.....Frank McDonald.
Sergeant.....Joseph Onon Whitcomb.
Sergeant.....James Arthur Hayes.
Sergeant.....Howard Clinton Strout.

Corporal.....Clement Whittier.
Corporal.....Walter Henry Rastall.
Corporal.....Ernest Lauren Watson.
Corporal.....Fred Albert Willard.

Company D.

Captain.....Rufus Houdlette Carlton.
First Lieutenant.....Howard Brett.
Second Lieutenant.....Edwin St. Elmo Mosher.
First Sergeant.....Charles Omer Porter.
Sergeant.....Fred Hale Vose.
Sergeant.....Roy Huntley Brown.
Sergeant.....Fred Carlton Mitchell.
Corporal.....George Estyn Goodwin.
Corporal.....Bertrand Clifford Martin.
Corporal.....Fred Merrill Davis.
Corporal.....William Bruce Hunter.

Band.

Captain and Musical Director...Irving Harry Drew.
First Lieutenant.....Charles Elbert Blackwell.
First Sergt. and Drum Major..Guy Alfred Hersey.
Sergeant.....Fred Albert Noyes.
Corporal.....Clifford Dawes Harvey.
Corporal.....Charles William Bartlett.

Signal Corps.

Second Lieutenant.....Maurice Henry Powell.
First Sergeant.....Julian Sturdevant Dunn.
Corporal.....Stephen Edward Woodbury.

THE PRESIDENT'S HOUSE.

CATALOGUE OF STUDENTS.

GRADUATES.

Crathorne, Arthur Robert, B. S.,	Champaign, Ill.,	Mt. Vernon [House.
Hamlin, Ralph, B. C. E.,	Orono,	Mrs. L. Hamlin.
Manson, Ray Herbert, B. M. E.,	Gardiner,	Mt. Vernon House.
Merrill, Elmer Drew, B. S.,	East Auburn,	Mt. Vernon House.
Rogers, Allen, B. S.,	Hampden,	Prof. A. B. Aubert.
Ryther, Leon Edwin, B. S.,	Bondsville, Mass.,	Mt. Vernon [House.

SENIORS.

Bassett, Eben Pierce,	Bangor,	201 Oak Hall.
Batchelder, Frank Lothrop,	Machias,	Miss A. T. Emery.
Belcher, Wallace Edward,	Plymouth, Mass.,	B. Θ. Π. [House.
Blackwell, Charles Elbert,	Madison,	Q. T. V. House.
Boynton, Alson Edwin,	Alna,	Q. T. V. House.
Brett, Howard,	Bangor,	201 Oak Hall.
Brown, John Wilson,	Brimfield, Mass.,	Mr. J. I. Park.
Carlton, Rufus Houdlette,	Cedar Grove,	K. Σ. House.
Caswell, Winfield Benson,	Waterville,	A. T. Ω. House.
Clark, Harold Hayward,	Ellsworth,	A. T. Ω. House.
Cleaves, Daniel Lunt,	Portland,	Mr. H. Perkins.
Collins, George,	Athol, Mass.,	203 Oak Hall.
Crockett, Cyrenius Walter,	Rockland,	B. Θ. Π. House.
Downing, Marshall Buckland,	Dover,	B. Θ. Π. House.
Drew, Irving Harry,	Bar Harbor,	Q. T. V. House.
Fernald, Reginald Lovejoy,	Orono,	Prof. M. C. Fernald.
Flint, Bert Whitaker,	Bangor,	Bangor.
Ford, Leonard Harris,	Bangor,	Bangor.

Grover, Archer Lewis,	Bethel,	205 Oak Hall.
Haney, William Wallace,	Eastport,	Mr. O. T. Goodridge.
Hayes, Clarence Morrill,	Milton, N. H.,	Q. T. V. House.
Hersey, George Woodman,	Portland,	A. T. Ω. House.
Heyer, Harry Sanford,	Friendship,	203 Oak Hall.
Hilton, George Libby,	Bradley,	Mrs. S. Gee.
Hoxie, Hall Farrington,	Waterville,	209 Oak Hall.
Mansfield, Edward Raymond,	Orono,	Mr. E. W. Mansfield.
Mayo, Herbert Palmer,	South Boston, Mass.,	301 Oak Hall.
Morell, William Bradley,	Amherst, Mass.,	B. Θ. Π. House.
Morrill, Walter Jean,	Madison,	K. Σ. House.
Mosher, Edwin St. Elmo,	Presque Isle,	205 Oak Hall.
Murray, William Augustine,	Pittsfield,	K. Σ. House.
Nelson, William,	Cumberland Centre,	305 Oak Hall.
Oswald, Herman Henry,	Philadelphia, Pa.,	A. T. Ω. House.
Palmer, Edward Everett,	South Bridgton,	B. Θ. Π. House.
Powell, Maurice Henry,	Orono,	Mr. S. H. Powell.
Powell, Mildred Louise,	Orono,	Mr. S. H. Powell.
Pretto, Joseph Henry,	Orono,	Mr. J. Pretto.
Sidensparker, Stanley,	Warren,	Mrs. Buck.
Small, Clinton Leander,	Auburn,	202 Oak Hall.
Smith, Edwin Melcher,	Gardiner,	207 Oak Hall.
Stephens, Allen Whitmore,	Oldtown,	Oldtown.
Stinson, Frank Minott,	Bath,	301 Oak Hall.
Stover, Oliver Otis,	Freeport,	202 Oak Hall.
Swain, John Henry,	Skowhegan,	K. Σ. House.
Swain, Pearl Clayton,	Solon,	Mt. Vernon House.
Veazie, Marcellus Maurice,	Islesboro,	Mrs. Ada Strout.
Wescott, Arthur Clement,	Portland,	Q. T. V. House.
Whittier, Charles Comfort,	Skowhegan,	Q. T. V. House.

JUNIORS.

Beedle, Harry Woodward,	South Gardiner,	207 Oak Hall.
Bird, Alan Laurence,	Rockland,	B. Θ. Π. House.
Bowerman, Frank Harvey,	Victor, N.Y.,	Prof. J. S. Stevens.

Brown, Roy Huntley,	Montague City, Mass.,	Still-[water.
Burgess, William Joseph,	Calais,	Mr. H. H. Finn.
Burnham, Agnes Rowena,	Oldtown,	Oldtown.
Cargill, Walter Neal,	Liberty,	Mr. O. T. Goodridge.
Caswell, Wilfred Harold,	Bridgton,	A. T. Ω. House.
Clark, Wilkie Collins,	Skowhegan,	Q. T. V. House.
Closson, James Edward,	Monson, Mass.,	208 Oak Hall.
Cole, Clinton Llewellyn,	Pleasantdale,	311 Oak Hall.
Cross, Harry,	Brewer,	Ktaadn Building.
Cushman, Harvey Barnes,	Rockland,	A. T. Ω. House.
Davis, Harry Ashton,	Orono,	Orono.
Drummond, Henry Frank,	Bangor,	K. Σ. House.
Dunn, Julian Sturdevant,	Cumberland,	K. Σ. House.
Eaton, Herbert Davidson,	Bangor,	Bangor.
Forbush, Ernest Carlton,	Marlboro, Mass.,	Mr. W. F. [Chase.
Fortier, Arthur Henry,	Oldtown,	Oldtown.
Goodwin, Philip Ross,	Randolph,	B. Θ. Π. House.
Gray, Charles Perley,	Oldtown,	Oldtown.
Hamlin, George Otis,	Orono,	Dr. H. Hamlin.
Hart, Malcolm Cole,	Willimantic,	Q. T. V. House.
Hatch, Howard Andrew,	Lindenville, O.,	B. Θ. Π. House.
Hayes, James Arthur,	Randolph,	211 Oak Hall.
Hersey, Guy Alfred,	Bangor,	K. Σ. House.
Holley, Clifford Dyer,	Farmington,	Mrs. S. Gee.
Horner, Leon Herbert,	Springfield, Mass.,	K. Σ. House.
Johnson, Frank Ortelle,	North Berwick,	Q. T.V. House.
Jones, William Goldsbrough,	Orono,	Rev. T. F. Jones.
Judge, Thomas Francis,	Biddeford,	208 Oak Hall.
Leslie, Raymond Everett,	Patten,	Mr. J. P. Spearin.
Lombard, Charles Hutchinson,	Portland,	307 Oak Hall.
Love, Alexander,	East Bluehill,	K. Σ. House.
Lurvey, John Gardner,	Portland,	307 Oak Hall.
McDonald, Frank,	Portland,	Q. T. V. House.
McPheters, Ralph Herbert,	Orono,	Mr. A. S. McPheters.
Maddocks, Howard Lewis,	Skowhegan,	Q. T. V. House.
Mann, Edwin Jonathan,	West Paris,	206 Oak Hall.

Merrill, Wilbur Louis,	East Parsonsfield, K. Σ. House.
Mitchell, Fred Carleton,	West Newfield, Q. T. V. House.
Mitchell, Frank Henry,	Charleston, Q. T. V. House.
Monohon, George Robert,	Cherryfield, A. T. Ω. House.
Murphy, George Ferguson,	Alewive, 109 Oak Hall.
Noyes, Frank Albert,	Berlin, N. H., K. Σ. House.
Owen, Alden Bradford,	West Pembroke, 109 Oak Hall.
Page, Arthur Southwick,	Fairfield, 211 Oak Hall.
Perkins, DeForest Henry,	North Brooksville, 111 Oak Hall.
Philoon, Daniel Lara,	Auburn, 312 Oak Hall.
Porter, Charles Omer,	Cumberland Mills, K. Σ. House.
Ricker, Percy Leroy,	Westbrook, 303 Oak Hall.
Robbins, Charles Alphonso,	Patten, Mr. J. P. Spearen.
Rollins, Clarence Herbert,	Veazie, Veazie.
Rollins, Frank Morris,	Waterville, A. T. Ω. House.
Russell, Leo Bernard,	Farmington, Q. T. V. House.
Smith, Edward Henry,	East Sullivan, 303 Oak Hall.
Smith, Freeman Ames,	Thorndike, Mass., K. Σ. House.
Stickney, Grosvenor Wilson,	Clinton, Mass., 206 Oak Hall.
Stowell, Clarence Warner,	Brimfield, Mass., 305 Oak Hall.
Strange, Edward Moore,	Calais, 112 Oak Hall.
Strout, Howard Clinton,	Orono, Mrs. Ada Strout.
Tate, Edwin Morrel,	South Corinth, Mr. Spaulding.
Tate, Fred Foy,	South Corinth, Mr. Spaulding.
Thombs, William Brackett,	Gorham, A. T. Ω. House.
Trim, Amariah Colby,	Islesboro, Mrs. Ada Strout.
Vose, Fred Hale,	Milltown, N. B., B. Θ. Π. House.
Webster, Frank Elijah,	Patten, Mr. E. Webster.
Weston, Benjamin Thomas,	Madison, 309 Oak Hall.
Weston, Wallace Augustus,	Madison, 309 Oak Hall.
Whitcomb, Joseph Onon,	Morrill, 111 Oak Hall.
Wormell, Ralph Geddes,	Waterville, A. T. Ω. House.

SOPHOMORES.

Adams, Nathan Herbert,	Notch, Mr. J. P. Spearen.
Armes, Will Addison,	Gardiner, Mr. H. H. Finn.
Bartlett, Charles William,	North New Portland, K. Σ. [House.
Bartlett, Mark Jonathan,	Montville, Miss A. T. Emery.
Bartlett, Wales Rogers,	Center Montville, 306 Oak Hall.

Bennett, Waldo Horace,	Newport,	Q. T. V. House.
Boardman, William Harris,	Calais,	Mr. H. H. Finn.
Bogart, Fred Hammond Hanson,	Chester, Conn.,	112 Oak Hall.
Bryer, Theodore Stevens,	Boothbay,	Q. T. V. House.
Buck, Henry Alfred,	Bucksport,	102 Oak Hall.
Buck, Thomas,	Orland,	Mr. H. H. Finn.
Cary, Lewis Robinson,	Bowdoinham,	Prof. G. M. [Gowell.
Clark, Samuel,	Waterville,	A. T. Ω. House.
Cobb, Arthur Leroy,	South Vassalboro,	Mr. O. T. [Goodridge.
Crosby, Robert Augustine,	Benton Falls,	Q. T. V. House.
Davis, Edmund Ireland,	Bangor,	B. Θ. H. House.
Davis, Fred Merrill,	Lewiston,	209 Oak Hall.
Davis, George Harold,	Auburn,	K. Σ. House.
Fitzgerald, Elsie Eunice,	Oldtown,	Oldtown.
Fraser, Gertrude Lee,	Oldtown,	Oldtown.
Freeman, George Leonard,	West Gray,	K. Σ. House.
Glass, Ralph Rigby,	Bangor,	Bangor.
Goodwin, George Estyn,	Gorham,	K. Σ. House.
Greene, James Arthur,	Bluehill,	204 Oak Hall.
Hall, Warren Callamore,	Brunswick,	A. T. Ω. House.
Hamlin, Emily,	Orono,	Mrs. L. Hamlin.
Harvey, Clifford Dawes,	Lewiston,	Q. T. V. House.
Harvey, Leroy Harris,	Orono,	Prof. F. L. Harvey.
Hoyt, Henry Perez,	Fort Fairfield,	A. T. Ω. House.
Hunter, William Bruce,	Vanceboro,	306 Oak Hall.
Keller, Percy Raymond,	West Rockport,	A. T. Ω. House.
Leonard, Herbert Henry,	Orono,	Mr. G. Leonard.
Libby, Wilbert Andrew,	Standish,	304 Oak Hall.
Linn, Robert Wilson,	Hartland,	Q. T. V. House.
Lowell, Frank Holt,	North Penobscot,	Mr. O. T. [Goodridge.
Maddocks, Lillian Maude,	Stillwater,	Stillwater.
Martin, Bertrand Clifford,	Fort Fairfield,	Q. T. V. House.
Martin, Fred Lewis,	Bluehill,	106 Oak Hall.
Merrill, Maurice Barnaby,	Stillwater,	Stillwater.
Mitchell, Charles Augustus,	West Newfield,	Q. T. V. House.
Nickerson, Percy Lee,	Swanville,	Mrs. Ada Strout.

Pritham, Harry Charles,	Freeport,	210 Oak Hall.
Rastall, Walter Henry,	Chicago, Ill.,	K. Σ. House.
Robinson, Alson Haven,	Orono,	Rev. P. J. Robinson.
Ross, Mowry,	West Woodstock, Conn.,	Ktaadn [Building.
Saunders, Harry Augustus,	Bluehill,	204 Oak Hall.
Shaw, Scott Parker,	North Gorham,	304 Oak Hall.
Shorey, Percival Gardner,	Belfast,	A. T. Ω. House.
Stilphen, Arthur Melvin,	Dresden Mills,	Mrs. T. Shatney.
Stilphen, Charles Augustus,	Dresden Mills,	Mrs. T. Shatney.
Swasey, Lawrence Mabry,	Limerick,	210 Oak Hall.
Thompson, Samuel Day,	Bangor,	B. Θ. Π. House.
Varney, Lewis Goodrich,	Windham Centre,	K. Σ. House.
Ward, Thomas Hale,	Fryeburg,	302 Oak Hall.
Watson, Ernest Lauren,	Brunswick,	302 Oak Hall.
Watts, Frank Erwin,	West Falmouth,	Stillwater.
Webster, William Bryant,	Coventry, Vt.,	Mr. C. Crowell.
Whittier, Clement,	Orono,	Rev. C. E. Whittier.
Willard, Fred Albert,	Lisbon,	K. Σ. House.
Woodbury, Stephen Edward,	Beverly, Mass.,	210 Oak Hall.

FRESHMEN.

Abbott, Horace Percy,	Eliot,	Mr. W. Colburn.
Alexander, Clayton Clifford,	Franklin, Vt.,	Mrs. Collins.
Allen, Roy Parker,	North Sedgwick,	Mrs. M. Wilson.
Bacheldor, Arthur Willis,	North Sebago,	305 Oak Hall.
Bartlett, Enoch Joseph,	Monroe,	Stillwater.
Blaisdell, Melvin Merle,	Fort Fairfield,	308 Oak Hall.
Bodge, Byron Hodgkins,	Wells,	Q. T. V. House.
Brown, Arthur Fred,	Belfast,	A. T. Ω. House.
Burns, Harry Buckman,	Westbrook,	104 Oak Hall.
Bussell, Edith Mae,	Oldtown,	Oldtown.
Butman, James Warren,	Readfield,	A. T. Ω. House.
Carr, Harold Malcolm,	Sangerville,	K. Σ. House.
Chadbourne, Henry Wilmott,	Mattawamkeag,	Ktaadn Build- [ing.
Chamberlain, Charles Edward,	Wilton.	Q. T. V. House.
Chase, Nathan Ajalon,	South Paris,	212 Oak Hall.
Cimpher, Orman Taylor,	Guilford,	Q. T. V. House.

Cole, Henry Ernest,	Pleasantdale,	311 Oak Hall.
Crowell, William Henry,	Middletown, Conn.,	Q. T. V. [House.
Davis, Alfred Ricker,	Auburn,	K. Σ. House.
Davis, Samuel Prince,	Portland,	B. Θ. Π. House.
Delano, Edward Warren,	Abbot Village,	B. Θ. Π. House.
Dow, Ernest Hillgrove,	Saco,	Mr. J. P. Spearen.
Dow, Roy Gay,	Bridgton,	Mrs. Marsh.
Dudley, Carl Child,	Bryant's Pond,	212 Oak Hall.
Duren, Harry Elwood,	Richmond,	405 Oak Hall.
Durgan, George Washington, Jr.	Sherman Mills,	310 Oak Hall.
Dyer, William Norman,	Harrington,	A. T. Ω. House.
Eldridge, Walter Hampton,	Bucksport,	Mr. J. P. Spearen.
Farrington, Herbert Oscar,	Portland,	Stillwater.
Fessenden, Lothrop Edwin,	Bridgton,	Mrs. Marsh.
Fogg, Walter S.,	Cornish,	401 Oak Hall.
Foster, Arthur Brookhouse,	Beverly, Mass.,	308 Oak Hall.
French, Henry Carter,	Rumford Centre,	Mr. E. Webster.
Gilbert, Eugene Clarence,	Orono,	Mr. T. Gilbert.
Graves, William,	Presque Isle,	A. T. Ω. House.
Greene, James Marquis,	Putnam, Conn.,	Q. T. V. House.
Hall, William Asbury,	Freeport,	Mrs. A. Graves.
Hamilton, Andrew George,	Orono,	Mr. H. Hamilton.
Hamlin, Horace Parlin,	Orono,	Mrs. L. Hamlin.
Hennessy, Harold Stewart,	Bangor,	B. Θ. Π. House.
Holmes, Fred Eugene,	East Machias,	Mr. J. P. Spearen.
Hunting, Eugene Nathan,	Plymouth, Mass.,	409 Oak Hall.
Johnson, Elbridge Augustus,	Deering,	Mrs. A. Cowan.
Kallom, Frank Winthrop,	South Berlin, Mass.,	Mrs. M. [Wilson.
Kelley, Burchard Valentine,	Centerville, Mass.,	Mr. J. P. [Spearen.
Kneeland, Henry Wilton,	Searsport,	204 Oak Hall.
Knight, Perley Charles,	South Gorham,	Mr. O. T. Good- [ridge.
Larrabee, Fay Frederick,	Prospect Harbor,	Mr. J. P. [Spearen.
Larrabee, George Pearson,	Pride's Corner,	310 Oak Hall.

Libbey, Joseph Metcalf,	Mattawamkeag	Mrs. [illegible] [Walton.
Livermore, Leon Forrest,	South Sebec,	K. Σ. House.
Lowe, Sumner Sturdivant,	Cumberland,	Mrs. A. Cowan.
Lyon, Alpheus Crosby,	Bangor,	Q. T. V. House.
McCarthy, Patrick Edward,	Lewiston,	Oak Hall.
McLaughlin, Ella,	Sprague's Mills,	Mt. Vernon [House.
Maddocks, John Henry,	Oldtown,	Oldtown.
Mansfield, Harold Wilder,	Union,	Mr. J. P. Spearen.
Margesson, Charles William,	Bangor,	Q. T. V. House.
Mitchell, Ezra Getchell,	Auburn,	Q. T. V. House.
Moore, Byron Newcomb,	Biddeford,	107 Oak Hall.
Mosher, Ira Enoch,	Richmond,	Stillwater.
Mosher, Percival Hildreth,	Pleasantdale,	Miss A. Fitzgerald.
Packard, Harry Elton,	Guilford,	Mr. L. P. Harris.
Pease, Irving,	Bean,	Ktaadn Building.
Peck, Luther,	Monson, Mass.,	204 Oak Hall.
Pipes, Harry Rufus,	Presque Isle,	A. T. Ω. House.
Pressey, Frank Ethelbert,	Bangor,	407 Oak Hall.
Rackliffe, Clinton Nathan,	Easton,	411 Oak Hall.
Rice, Marie Cecilia,	Bangor,	Bangor.
Ross, Edwin Bishop,	Bangor,	B. Θ. Π. House.
Russell, Roy Elvert,	Livermore,	310 Oak Hall.
Sewell, Herbert Willis,	Wilton,	Q. T. V. House.
Shaughnessy, James,	St. Stephen, N. B.,	Mr. J. P. [Spearen.
Silver, Arthur Elmer,	Silver's Mills,	Mrs. S. Gee.
Small, Silas Gilman,	Lubec,	Mr. J. P. Spearen.
Smith, Royal Holland,	Orono,	Mill Street.
Spearen, Ella Elmira,	Orono,	Mr. J. P. Spearen.
Taft, DeForest Reed,	Winchester, N. H.,	Mr. W. Col- [burn.
Towle, Jessie Craig,	Sherman Mills,	Miss A. Fitz- [gerald.
True, Edwin Stanley,	Portland,	B. Θ. Π. House.
Vickery, Frank Spencer,	Woodstock, N. B.,	Mr. C. [Crowell.
Warren, John Clifford,	Westbrook,	K. Σ. House.

Watson, Alvin Morrison,	Portland,	K. Σ. House.
Webb, Arnold Stedman,	Portland,	B. Θ. Π. House.
Wheeler, Allen Francis,	Brunswick,	A. T. Ω. House.
Whittier, Ralph,	Orono,	Rev. C. E. Whittier.
Wight, James Herman,	Naples,	Mrs. Collins.
Wilkins, Harry Fred,	Monson,	Mrs. A. D. Merry.
Williams, Thomas Herbert,	Topsham,	403 Oak Hall.

SPECIAL STUDENTS.

Barney, John E.,	Canaan, N. H.,	Oldtown.
Barrows, William Edward, Jr.,	Augusta,	B. Θ. Π. House.
Bean, Ida May,	Oldtown,	Oldtown.
Benson, Frank Smith,	Bangor,	B. Θ. Π. House.
Douglass, Carroll Stephen,	Guilford,	Mr. E. Webster.
French, Joseph Edwin,	South Chesterville,	Mr. J. P. [Spearen.
Gilman, Francis Alleine,	Orono,	Q. T. V. House.
Hellier, Maude Winifred,	Bangor,	Bangor.
Jeffery, Perley Eugene,	Monmouth,	Ktaadn Building.
Loud, Herbert Spencer,	Round Pond,	104 Oak Hall.
MacGregor, Roderick James,	South Lincoln,	Mrs. A. D. Merry.
Nichols, Mrs. Mabel Carlton,	Orono,	Mt. Vernon House.
Phillips, Irving Wadsworth,	Somers, Conn.,	Mr. J. P. Spearen.
Sabine, Ralph Harvey,	Pomfret, Conn.,	Mr. J. P. [Spearen.
Sawyer, William McCrillis,	Bangor,	B. Θ. Π. House.
Snow, Charles Wyman,	South Brewer,	Mrs. T. Shatney.
Tolford, Arthur Roebuck,	Portland,	107 Oak Hall.
Wells, Charles Nelson,	Minot,	Mr. W. Page.
Young, Burt Linwood,	Augusta,	Prof. W. M. Munson.

STUDENTS IN SHORT THE WINTER COURSE IN AGRICULTURE.

Andrews, Henry Asa,	Otisfield Gore,	Mr. J. P. Spearen.
Boothman, Hiram John,	South Portland,	Mr. J. P. [Spearen.
Brown, Irving Elwood,	Norway,	Mr. J. P. Spearen.
Colson, Charles Alfred,	Winterport,	Mr. J. P. Spearen.

Colson, Franklin Asbra,	Winterport,	Mr. J. P. Spearen.
Newell, Bertrand Allard,	South Waterboro,	Mr. J. P. Spearen.
Tyler, Eugene,	Greenville,	Mr. W. Page.
Wells, Charles Nelson,	Minot,	Mr. W. Page.

STUDENTS IN THE SCHOOL OF LAW.

SENIORS.

Fenderson, Frank Devereux,	East Parsonsfield,	260 Hammond Street.
Graham, Herbert Lewis,	Bar Harbor,	Penobscot Exchange.
Jones, Freeland,	Bangor,	37 Fifth Street.
McGill, Laurence Vincent,	East Rochester, N. H.,	17 Harlow Street.
Williams, Charles Evarts,	Brewer,	Brewer.

JUNIORS.

Cook, Harold Elijah,	Vassalboro,	17 James St.
Dolan, John Frederick,	Bangor,	77 Second St.
Foss, Paul Frank,	Weston,	17 Prospect St.
Gibbs, Bernard Alston, B. S., *University of Maine.*	Glenburn,	70 Grove St.
Graton, Claude Dawing,	Burlington, Vt.,	11 Cedar St.
Hobson, Ernest Emery,	Palmer, Mass.,	50 Charles St.
Hutchings, Edward, B. A., *Bowdoin College.*	Brewer,	Brewer.
Leathers, Joseph Wesley, B. A., *Bates College.*	Bangor,	27 Forest Ave.
McCarthy, Matthew,	Bangor,	182 York St.
Mackay, John Daniel,	Lake Ainslie, N. S.	
Oliver, Charles Richard,	Bangor,	182 Cedar St.
Price, Arthur Wellington, B. A., *Wesleyan University.*	Dresden Mills,	65 Summer St.
Robinson, Agnes May,	Sherman Station,	90 Grove St.
Sawyer, William McCrillis,	Bangor, 64 Forest Ave.,	Bangor.
Sargent, Walter Joseph, B. A., *Bowdoin College.*	Brewer,	Brewer.

Small, Frank Jackson, B. A., *Bowdoin College.*	Oldtown,	Oldtown.
Theriault, Dana Leo,	Caribou,	182 York St.
Thompson, Frederick E., *Brown University.*	Bangor,	27 Sixth St.
Waterhouse, William H.,	Oldtown,	Oldtown.
Williams, Dana Scott,	Lewiston,	11 Cedar St.

SPECIAL STUDENTS.

Barker, Lewis Appleton,	Bangor.	292 Hammond St.
Dennett, Carl Pullen,	Bangor.	17 Forest Ave.
Robinson, William Henry,	Bangor.	9 South St.
Snare, Austin White, B. A., *Colby College.*	Hampden Corner,	Hampden [Corner.
Trask, Allen Pierce,	Bangor.	176 Ohio St.

SUMMARY.

Graduate Students,	6
Seniors,	48
Juniors,	71
Sophomores,	60
Freshmen,	89
Special Students,	19
Students in the Winter Course in Agriculture,	8
Seniors, School of Law,	5
Juniors, School of Law,	20
Special Students, School of Law,	5
	331
Entered twice,	2
Total,	329

INDEX.

	PAGE.
Absence from examinations,	98
Admission by certificate,	24
Admission, divided examinations for,	16
Admission of college graduates,	16
Admission of special students,	16
Admission to advanced standing,	16
Admission to School of Law,	93
Admission to the university,	16
Admission to winter courses,	16
Agricultural course,	79
Agricultural experiment station,	83
Agricultural experiment station building,	30
Agricultural experiment station council,	12
Agricultural experiment station, publications of,	105
Agricultural winter course,	80
Agricultural winter course, students in,	123
Agriculture, College of,	79
Agriculture, instruction in,	54
Agriculture, short courses in,	80
Alumni association,	103
Anatomy, instruction in,	53
Analo Saxon, instruction in,	34
Annual catalogue of the university,	105
Annual report of the university,	105
Annual report of the station,	105
Appointments,	109
Approved schools,	24
Arts and Sciences, College of	71
Associations,	104
Astronomy, instruction in,	45
Bacteriology,	56
Biological chemistry,	54
Board,	101
Bond,	16
Botany,	51, 53, 56
Buildings,	29
Bulletins, university,	105
Bulletins, experiment station,	105
Cadets, organization of,	112
Cadet, the,	105
Calendar,	6

	PAGE.
Catalogue, the short,	105
Certificate, admission by,	24
Certificates for graduates of short courses,	91
Certificates, awarded at commencement,	106
Chapel,	110
Chemical course,	75
Chemistry, instruction in,	48
Church attendance,	110
Circulars, university,	105
Civics, instruction in,	39
Civil engineering course,	84
Civil engineering, instruction in,	60
Class day,	7
Classical course,	71
Coburn Hall,	30
Commencement, date of,	7, 8
Commencement programme,	106
Commencement speakers,	109
Convocation,	7
Courses of study,	69
Course of study, School of Law,	94
Dairy building,	31
Dairying, winter course in,	82
Declamations,	83
Declamations, sophomore prize,	108
Degrees, School of Law,	94
Degrees conferred,	106
Deposit,	101
Dormitories,	101
Drawing, instruction in,	47
Drill, military,	67
Electrical engineering course,	87
Electrical engineering, instruction in,	65
Encampment, the,	101
Endowment,	10
Engineering, College of	84
English, instruction in,	33
English literature, instruction in,	34
English, requirements in,	20
Entomology, instruction in,	53
Entrance examinations,	17
Entrance examinations, dates of,	6, 7, 8
Entrance requirements,	17, 20
Equipment,	29
Essays,	33
Examinations for admission, local,	17
Examinations, rules in regard to,	98
Examinations, the before-term,	6, 7
Excuses,	98
Executive committee,	11
Expenses of students,	99
Expenses, School of Law,	95
Experiment station,	83
Experiment station building,	30
Experiment station council,	12
Faculty,	13
Faculty, School of Law,	92
Fees, laboratory,	100
Fernald Hall,	29
Field day,	97
Fraternities,	104

	PAGE.
Fraternity houses,	32
French, instruction in,	35
French literature, instruction in,	37
French, old, instruction in,	36
Freshman year, studies of,	70
Geology, instruction in,	53
German, instruction in,	35
Herbarium,	96
Histology, animal,	56
Histology, plant,	57
History, instruction in,	39
Honorary society,	104
Honors in scholarship,	98
Horticultural building,	31
Horticultural winter course,	81
Horticulture. instruction in,	56
Income of the university,	10
International law,	40
Italian, instruction in,	36
Ivy day,	7
Junior exhibition,	108
Junior exhibition speakers,	109
Kidder scholarship,	108
Kittredge loan fund,	102
Laboratory charges,	100
Laboratories, description of,	30
Latin, instruction in,	37
Latin scientific course,	72
Law, instruction in,	40
Law, school of,	92
Library, the,	30, 95
Loan funds,	102
Logic, instruction in,	39
Machine shop,	30
Maine Bulletin, the,	105
Mathematics, instruction in,	43
Mechanical engineering course,	85
Mechanical engineering instruction in,	62
Medicine, course preparatory to,	76
Military drill,	67
Military organization,	112
Military science, instruction in,	67, 111
Military science, requirements in,	67
Military uniform,	111
Mineralogy, instruction in,	50
Mt. Vernon House,	31
Municipal law,	40
Museum,	96
Natural history, instruction in,	51
Oak Hall,	29
Organization of Cadets,	112
Organizations,	104
Pharmacy, College of,	89
Pharmacy course,	89
Pharmacy, instruction in,	58
Pharmacy short course,	90
Philosophy, instruction in,	39
Physics, instruction in,	46
Physiology, instruction in,	52
Political economy, instruction in,	39
Preparatory medical course,	76
Prism, the,	105
Prizes,	108

	PAGE.
Psychology, instruction in,	38
Publications of the university,	105
Quota of studies,	70
Reading rooms,	95
Regulations of the university,	97
Reports of standing,	98
Report, the annual university,	105
Report, the annual station,	105
Rhetoric, instruction in,	33
Rooms,	101
Scholarship, honors in,	98
Scholarships,	108
School of Law,	92
School of Law, admission,	93
School of Law, Advisory Board,	92
School of Law, courses of study,	94
School of Law, degrees,	94
School of Law, expenses,	95
School of Law, faculty,	92
Scientific course,	73
Shop, description of,	30
Short catalogue,	105
Short courses,	80, 90
Societies,	104
Sophomore declamation speakers,	109
Spanish, instruction in,	36
Special courses,	80
Standings of students,	98
Students, catalogue of,	115
Students, number of,	125
Studies, quota of,	70
Tables, explanation of,	70
Terms, beginning and end of,	6, 7, 8
Text books,	100
Thanksgiving recess,	6, 7
Themes,	33
Treasurer,	11
Trustees, Board of,	11
Trustees, meetings of,	6, 7
Tuition,	100
Tuition loans,	102
Uniforms,	111
University, charter of,	9
University, establishment of,	9
University, location of,	110
University, object of,	9
Vacation, the senior,	7
Veterinary science, instruction in,	56
Wingate Hall,	29
Winter courses,	80
Women, admission of,	16
Worship, public,	110
Young Men's Christian Association,	104
Zoology, instruction in,	52, 53

UNIVERSITY OF ILLINOIS-URBANA
3 0112 112205239